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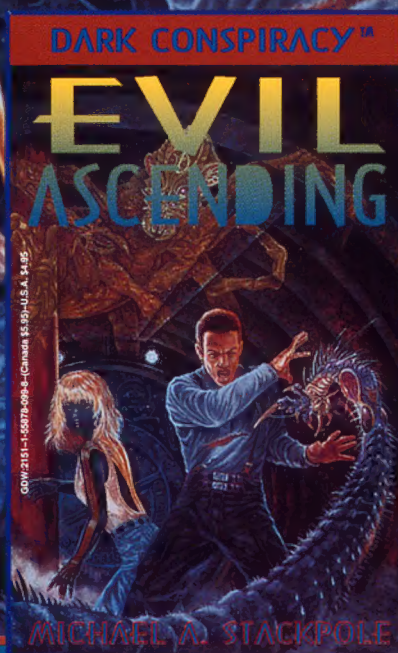
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EQUALIZER PROJECT

By Terrence R. McInnes

Being out of work stinks, but it's an occupational hazard for PC groups. A wet navy ticket they read about looks like the best chance in a long time to get off their current dirt ball and back into action.

This campaign can use characters from a pre-existing campaign set in the Spinward Marches, or new characters may be generated with the sailors basic character generation tables. However, in the case of pre-existing characters, the referee may need to establish certain

skill equivalencies or overlaps for characters not immediately suited to a nautical excursion.

TICKET

The PCs will have no difficulty finding the local Ling Personnel Systems (LPS) office and will endure only a short wait before being taken into the recruiter.

The LPS recruiter is a typical soft bureaucratic type who swears the characters to secrecy before beginning his briefing. He also makes them sign a confidentiality agreement which threatens legal action if they tell anyone the information he is about to share.

The recruiter is looking for wet navy officers and sailors to serve as advisors and officers in the maritime forces of Lanax, a nation on Aramanx, a balkanized world in the Aramis subsector of the Spinward Marches. (Aramanx/Aramis/Spinward Marches 0605 B65797-6).

Lanax is under attack by the combined forces of the Lovrenyi/Union of Senled Alliance. Although the large and well-equipped Lanaxian ground forces initially lost

Geographical Features

Bheroven

East Bheroven

Legend:
- Forest
- Desert
- /// Urban area
- Agricultural

860 km
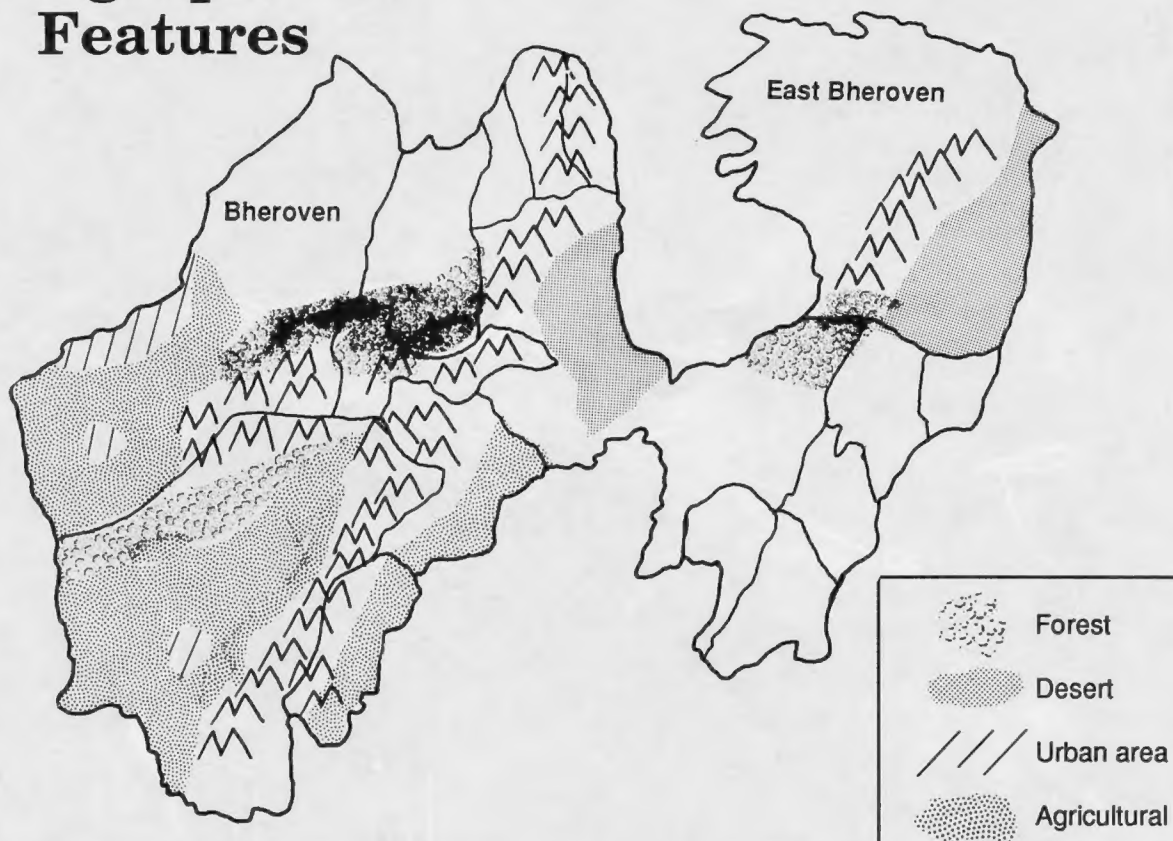
Military Situation in 001-1124

East Bheroven

North States League

Bheroven

Bandar Senled

Union of Senled

Uslar

Stexl

Renitza

Lovrenyi

Leneeza

Coastal Coalition

Lanax

Dalelo

Port Lanax

Legend:
- National capital/shuttleport
- National capital
- Major city
- Lovrenyi/Senled Alliance
- Occupied by Alliance
- Naval base
- Air base

860 km
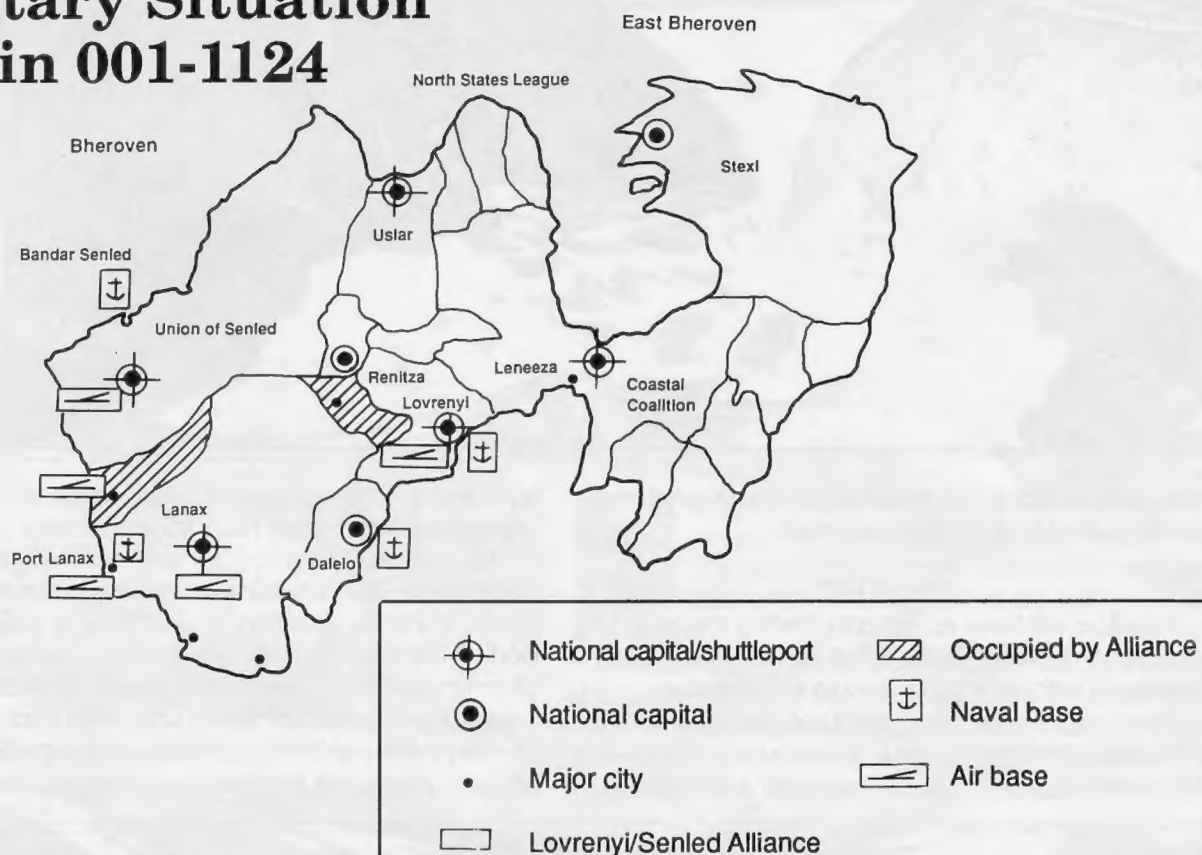
some ground because of surprise, the ground war has become a stalemate in the mountainous center of the Bheroven continent. The Alliance has developed a potent wet navy of TL6 surface vessels. With this navy, the Alliance is cutting Lanax off from the resources of Klavisur, a nation on Lowestowe continent, and has landed Alliance amphibious raiding parties behind Lanaxian lines. If the Alliance fleet is not stopped soon, a major amphibious invasion may decide the war in the Alliance's favor and replace a representative democracy with harsh autocratic rule.

To counter this, Lanax has developed a fleet of its own. Although indigenous sailors form the bulk of the naval personnel, Lanaxian sailors lack solid naval combat experience. To remedy this, the Lanax government has hired LPS to recruit experienced wet naval officers from off-world.

The recruiter can offer the PCs each a one-year contract, with a base pay of Cr500,000, plus a mid-passage ticket to Aramanx. Officer PCs will each be commissioned as officers in the Lanaxian Navy, with at least the rank of lieutenant (volunteer). Officers with a rank higher than lieutenant will receive a commission with a rank one lower than their current rank. Sailor PCs with Gunnery, Electronic or Technical skills will be hired as warrant officer specialists at the same pay.

If the war continues past the end of the contract, the characters will be paid their salary and given a mid-passage ticket to the world of their choice. They will also be given the opportunity to re-enlist for one year for an additional Cr500,000.

Should the war end within the year with a Lanaxian victory, PCs will be mustered out of the Lanaxian Navy with full pay and a mid-passage ticket on the day peace is declared. If the Alliance wins within a year, LPS will guarantee a repatriation bond for each PC, with 10% of the remaining unpaid salary and a low-passage ticket to Aramis.

If the characters accept, they are immediately handed their mid-passage tickets and hustled aboard a ship's launch that has landed on the building roof. The launch takes off for a rendezvous in orbit with a Type A2 far trader about to jump out-system.

REFEREE'S INFORMATION

Veteran PCs should infer that Ling Personnel Systems is a subsidiary of the Ling Standard Products megacorporation. That and the hefty salaries mean that they are not recruited to fight for freedom and democracy. They are fighting for Ling Standard Products, a megacorporation specializing in mining and manufacturing, which has had a long-term interest in exploiting the rich mineral resources of Aramanx and preventing its arch-rival, Sternmetal Horizons LIC, from gaining control of the planet.

HISTORICAL BACKGROUND

The true story of Aramanx is a long megacorporate struggle for mineral resources. Rather than spend the money to control Aramanx directly, Sternmetal has taken advantage of the long years of violent balkanization on the Bheroven continent by backing Lovrenyi, a small but industrialized nation, in its struggle with its neighbors. By introducing mercenary forces to help Lovrenyi annex its neighbors, Dalelo and Renitza, then engineering the Bheroven Alliance Treaty between Lovrenyi and the Union of Senled, Sternmetal seemed poised to take Aramanx via its puppet governments.

However, the nation of Lanax, seemingly doomed by the forces arrayed against it, looked for help off-world and eventually offered its mineral resources to Ling Standard Products (LSP) if the megacorporation would help it against its enemies. LSP brought in its own mercenaries, including the *Kforuzeng* and other Vargr corsair bands.

These wars have raged from 1100, with the interruption of the Fifth Frontier War and the Rebellion. The former reduced trade to such low levels that the megacorps temporarily abandoned their claims, and the disruption from the latter allowed the *Kforuzeng* to slip in and occupy Aramanx and the entire Towers Cluster.

Two years later, in 1118, Duke Norris' forces re-took parts of the Towers Cluster, including Aramanx. The megacorporations returned as well, the nations of Bheroven re-armed against each other, and conflict resumed.

In 1122, Sternmetal Horizons decided to settle the Aramanx question once and for all. Sternmetal supported the Lovrenyi/Senled Alliance in a campaign to annex Lanax, eliminate LSP influence from the world and gain control of the richest section of Bheroven. This included financing the Alliance and employing ground, air and nautical mercenaries to advise, stiffen and spearhead local forces. With Sternmetal's help, the Alliance acquired a wing of *Cheyenne*-class jet fighters, more than a match for the propeller-driven *Tucsons* and *Chicagos* flown by the Lanaxian Air Force. Sternmetal also helped the Alliance build a fleet of nautical destroyers and cruisers to be used to bombard Lanaxian coastal cities and support amphibious raids. The Alliance attacked in mid-1122 and touched off a long-dreaded world war.

Lanax replied with its own wet navy. This fleet initially included destroyers and cruisers used in a coastal defense role, as well as diesel-electric submarines to raid commerce between the Alliance ports on Bheroven and Klavisur on Lowestowe, a neutral nation supplying mineral and agricultural resources to both sides.

More recently, LSP has secretly imported several fission reactors and plutonium fuel into Lanax, and installed three reactors into three hulls nearing completion.

GETTING THERE IS HALF THE FUN

The Type A2 far trader will follow a circuitous route through backwater systems to Aramanx, as secrecy is of the utmost importance.

Ling Standard Product's introduction of fission reactors is a violation of the Imperial Rules of War against excessive extraplanetary interference and could result in Imperial intervention on Aramanx if the interference is too blatant. That's why the characters were suddenly hustled into orbit and aboard the far trader. Ling Standard Products wants to conceal its hiring of wet mercenaries from both Duke Norris' government and Sternmetal Horizons.

Sternmetal is aware of Ling's intentions to import mercenaries, and its corporate patrol cruisers are searching for Ling ships bound for Aramanx. Norris' patrol ships may also stop and challenge the far trader. And Vargr corsairs are active, making deep raids into the coreward half of the Spinward Marches. Encounters with Sternmetal, Domain

Aramanx B6579746-6
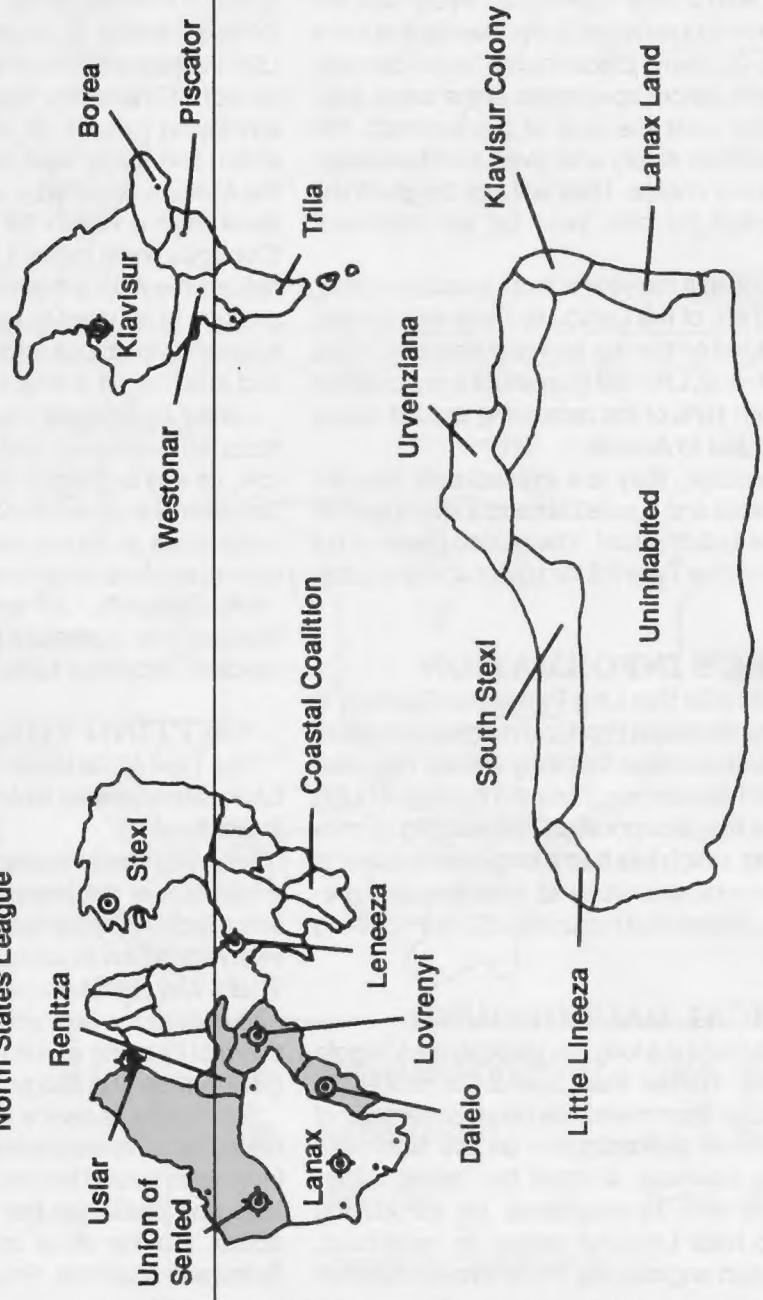
Vanghir

The Wildings

Westvanghir

East Bheroven

Stexl

Borea

Klavisur

Piscator

Trila

Westonar

Coastal Coalition

Bheroven

North States League

Renitza

Uslar

Union of Senled

Lanax

Dalelo

Lovrenyl

Leneeza

Little Lineeza

South Stexl

Uninhabited

Urvenziana

Klavisur Colony

Lanax Land
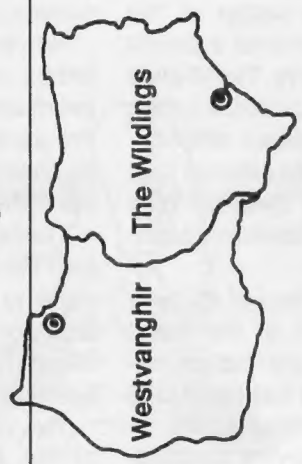
◈ National capital/shuttleport

◉ National capital

· Major city

▨ Lovrenyi/Senled Alliance

Equatorial Diameter=9600 km

naval ships and Vargr corsair ships are likely during the voyage to Aramanx, and can result in everything from boarding and searches to running space battles. Refueling and resupply attempts at one or more interdicted worlds may require dealing with Scout Service vessels.

ARRIVING AT ARAMANX

The arriving characters will find the Aramanx system patrolled by a Domain of Deneb cruiser squadron. The squadron has two purposes: to ward off any attack from Vargr-controlled worlds only two parsecs away and to enforce the Imperial Rules of War. The latter task includes policing against the use of nuclear weapons in the Aramanx war, and prohibiting the introduction of excess extraplanetary technology and support.

Any use of nuclear weapons will result in an immediate response from Norris' marines aboard the cruiser squadron. The squadron will destroy any reconnaissance satellites launched from Aramanx and attack any orbiting starship giving fire support to any of the combatants on planet.

Domain close escorts and system defense boats will stop and search all arriving starships. The characters have false documents indicating they are wet merchant ship officers returning to work in the neutral nation of Klavisur. Each character should roll this task when his documents are checked:

To avoid detection of forgery:
Simple, Persuasion, 1 min (fateful).

Once cleared into the system, the far trader docks at Aramanx Orbital Starport. There are no downports on Aramanx. However, shuttle service is provided to airports outside each nation's capital. While the orbital starport enjoys extrality and is treated as a neutral territory, surface airports are under their nation's jurisdiction. The shuttles themselves are regarded as neutral vessels and are not to be fired on by combatant forces. However, the airports are vulnerable to air raids at any time.

Agents of both megacorporations are aboard the orbiting starport and are on the lookout for any off-planet mercenaries their opponents may import to Aramanx. Arriving mercenaries have been assaulted and killed by megacorporation agents while transiting through the starport. If the characters' true identities become known, they may be attacked by Sternmetal agents.

To maintain their identities as Klavisur citizens, the PCs should take the shuttle to the Klavisur capital. From there, they take ship aboard a neutral Klavisur wet freighter bound for Lanax. Before reaching Lanax, however, the freighter must pass through an Alliance blockade. If detected by blockading vessels, the freighter will be stopped and searched. If boarding parties find the PCs without proper documentation, the PCs will be arrested and imprisoned in Lovrenyi.

SITUATION

Once the characters arrived in Lanax, they are assigned to the Equalizer, which is berthed at Port Lanax on that nation's west coast, along with a sizable portion of the Lanax fleet. Port Lanax is that nation's primary naval base and is a major seaport. It is also under frequent air attack by Alliance Chicago-class ground-attack aircraft escorted by Cheyenne-class jet fighters. When the characters arrive, they will see that buildings, dockyards and some ships are obviously damaged. One or more fires may be burning, and within hours of the PCs' arrival, Alliance aircraft attack the dockyard area around the Equalizer.

The local population appears to be quite demoralized by the attacks. Chance meetings and casual conversations at the Rusty Porthole, a nearby sailors' bar, may reveal that the war is not going well. Alliance forces occupy about 20% of Lanax in two areas—the eastern mountain region adjacent to Renitza and Lovrenyi, and the forested area between the Senled border and the north bank of the Dunbur River. Alliance engineers have built a forward air base inside occupied Lanax territory used to mount the raids on both Port Lanax and Lanax City, the capital. Most of the locals feel it is only a matter of time before forces push south toward Port Lanax, possibly supported by amphibious landings near the port, then drive east toward the capital.

The Equalizer is a battlecruiser armed with a 36cm main battery, the heaviest guns on the planet. The ship is powered with a fission reactor, a clear violation of the rules of war. The characters may also see an aircraft carrier and a submarine under the final stages of construction at fitting out piers near the battlecruiser. An experienced wet navy sailor will notice that these ships are fission-powered as well.

INTO THE WAR

The PCs should be assigned in relatively close proximity to each other aboard the Equalizer. If they are officers and/or have Large Watercraft or Navigation skills, they should be assigned to the bridge as either watch standers or advisors to indigenous naval officers. If they have gunnery skills, they are assigned to a main battery turret.

Optionally, characters may be generated with the COACC advanced flyers character generation tables for flight positions aboard Talon.

Existing MegaTraveller characters with either Engineering or Navigation skills may be used on any of the three vessels. Engineering skill is needed to operate and maintain the fission power plants aboard these vessels. Characters with FA Gunnery skills may use these skills with the Equalizer's batteries. Characters with Forward Observer skills may be employed as either airborne or shore party FOs to direct fire from the Equalizer or call in air strikes by Talon aircraft.

FLEETS

Lanax: The Lanax Navy is expected to play a major role in fending off the expected invasion and carrying the war home to the Alliance. However, most of its vessels are currently bottled up in Port Lanax. As of 001-1124, the navy includes:

1 Equalizer-class battlecruiser at Port Lanax.

1 Talon-class aircraft carrier (fitting out) at Port Lanax.

1 Kraken-class nuclear attack submarine (fitting out) at Port Lanax.

3 Hero-class light cruisers, 2 at Port Lanax, 1 at sea off Klavisur.

10 *Battle*-class destroyers, 4 at Port Lanax, 4 at sea off Klavisur, 2 on convoy escort.

9 *Province*-class frigates, 3 at Port Lanax, 6 at sea on convoy escort.

2 *City*-class diesel electric attack submarines, at sea off Senled.

Alliance: Consisting mostly of the Senled Navy, the Alliance fleet is blockading Lanax seaports and raiding Lanax convoys. An amphibious task force has been formed for raiding and invading Lanax territory.

2 heavy cruisers, 1 on blockade duty off Port Lanax, 1 attached to the amphibious task force at Bandar Senled, the main Alliance naval base.

4 light cruisers, 1 on blockade duty off Port Lanax, 1 off the Lanax south coast, 1 raiding convoys off Klavisur.

16 destroyers, 6 on blockade duty off Port Lanax, 6 raiding convoys off Klavisur, 4 attached to amphibious task force at Bandar Senled.

6 diesel-electric attack submarines, 2 off Port Lanax, 1 off Klavisur, 3 at Bandar Senled.

4 Frigates, Lovrenyi Navy based at Lovrenyi.

1 frigate, Dalelo Coast Guard, based at Dalelo.

MISSIONS

The *Equalizer* has just finished fitting out and is loading stores and ammunition as the characters arrive. She will be sailing on her first war patrol within 36 hours after the characters arrive and are assigned their duty stations. The *Equalizer* has sealed orders for a number of missions including:

Breakout: Go head-to-head against the allied blockade off Port Lanax. The objective is to break the blockade, sinking as many enemy ships as possible, and to head for the open sea. The *Equalizer* will be supported by all available combat vessels. In addition, one wing of *Chicago* attack aircraft (36 planes) and one squadron of *Tucson* fighter aircraft are available from Port Lanax air base to support the breakout. Two coast artillery batteries with two 36cm high-velocity cannons each can support the *Equalizer* up to 75 kilometers from the coast.

Blue Water Sweep: Once the blockade is broken, the *Equalizer* and supporting cruisers are to sail to the Klavisur coast. There, they are to link up with Lanax Navy vessels on station and search for and destroy Alliance convoy raiders.

Raid: The *Equalizer* and supporting cruisers are to return to Bheroven via the Northern Sea and raid Bandar Senled while en route home to Port Lanax. If they can conceal themselves and maintain surprise in the foul weather expected in northern latitudes, the raiding force should be able to catch the Senled amphibious task force vessels at their piers.

Air Strike: By the time the *Equalizer* and the two light cruisers return home, the *Talon* will have completed fitting out and will have received her air wing. The *Equalizer* will escort the *Talon* on her first mission, attacks from the sea against the Alliance *Cheyenne* fighter bases north of the Dunbur River and near the Senled capital. Pilots serving with the mercenary air wing aboard the *Talon* should expect heavy air-to-air and air-to-ground action while attacking these bases. They are heavily defended with both *Cheyenne*-class jet fighter aircraft and TL6 antiaircraft artillery.

War Patrol: Characters serving aboard the *Kraken* will sail her to the Klavisur west coast to search for and destroy Alliance warships and merchantmen. Because of supply

Heavy High-Velocity Guns

	Indirect Fire	ROF by Tech Level								
Bore (cm)	Volume (kl)	Weight (tons)	Price (MCr)	Range (km)	Signature	5	6	7	8
30	30	30	0.8	(Regional) 70	H	1/4	1/4	1/2	1/2
32	50	50	1.0	(Regional) 75	H	1/4	1/4	1/4	1/2
34	60	60	1.1	(Regional) 75	H	1/4	1/4	1/4	1/4
36	75	75	1.2	(Regional) 75	H	1/8	1/4	1/4	1/4
38	85	85	1.4	(Regional) 85	H	1/8	1/8	1/4	1/4
40	100	100	1.6	(Regional) 90	H	1/8	1/8	1/8	1/4
45	150	150	2.4	(Regional) 100	H	1/8	1/8	1/8	1/8
50	200	200	3.2	(Regional) 120	H	1/16	1/8	1/8	1/8

At TL5 long-range heavy high velocity guns become available at calibers greater than 30cm. Their characteristics are described here.

Heavy High-Velocity Ammunition

	HE	KEAPER								
Bore (cm)	Volume (kl)	Weight (kg)	Pen	Danger	Cr	Dmg	Pen	Cr	Dmg
30	0.42	420	32	50	1680	38	50	1850	33
32	0.56	560	33	55	2040	40	54	2210	37
34	0.63	630	34	60	2480	42	55	2650	41
36	0.675	675	35	65	3190	44	56	3360	43
38	0.865	865	36	70	3680	46	57	3950	45
40	0.990	990	38	75	4090	50	59	4360	48
45	1.44	1440	40	85	4610	54	63	4880	52
50	2.025	2025	44	100	6840	60	66	7350	56

Heavy high-velocity guns may be mounted in turrets aboard naval ships, in fixed coastal defense installations and as railway artillery. The rates of fire noted above are for naval gun turrets and coastal defense installations with powered shell hoists and rammers. Halve the rates of fire for railway artillery guns.

constraints, the *Kraken* will remain on station for 30 days. Roll once each day on the encounter table below for shipping encounters.

Roll	Result
1	Alliance warship
2	Alliance merchantman
3	Alliance merchantman convoy
4	Neutral merchantman
5	Lanax merchantman
6	Lanax warship

Roll 1D6 again for the number Alliance warships encountered, and the number of merchantmen and warships in the Alliance convoy. If you roll a 6 on the second roll, the Alliance light cruiser is included in the encounter. The result should be adjusted to reflect the number of ships remaining after the *Equalizer's* blue water sweep. All merchantmen are freighters.

A Lanax warship may detect the *Kraken*, treat her as hostile and attack.

Invasion: After the *Talon's* air strikes cause panic in the Senled population, the Alliance decides to force the war and attacks in force on two fronts, one from the east through the mountains and one south across the Dunbur. The north-south attack is supported by amphibious landings south of Port Lanax. The amphibious task force includes all surviving attached warships and 2D6+10 freighters used as troop transports and assault cargo ships. All Lanax naval units are to attack and sink as many of the troop transports as possible. If the amphibious invasion fails, the Lanax army will be able to repulse the remaining two attacks. If the invasion succeeds, Port Lanax will be captured, and Lanax will lose the war.

TRANSFERS

The aircraft carrier *Talon* will be ready for combat one month after the characters arrive on planet. The nuclear attack submarine *Kraken* will be ready a month later. To provide a variety of combat experience, the player characters may be transferred to either vessel after *Equalizer* returns to port.

Talon will embark a specially trained off-planet TL7 mercenary air wing equipped with 12 *Dodge City* light jet fighters, 36 *San Diego*-class attack aircraft, and four *San Diego*-class two-seat variants used as command and control aircraft. *Talon* will provide air cover for *Equalizer*, raid Alliance convoys and, most importantly, attack *Cheyenne* fighter bases. Because of *Talon's* unlimited range and the lack of reconnaissance satellites around Aramanx, the Alliance would not know when or from where the next *Talon* attack will come.

Kraken will hunt and sink Alliance shipping. This will slow the Alliance's war effort by cutting Lovrenyi and Senled off from critical minerals and food from Klavisar. Gunnery skills may be used to crew the torpedo tubes aboard *Kraken*.

ENDING THE WAR

The war will last 3D6 months after the characters arrive on-planet. The three nuclear-powered ships give Lanax a major advantage in determining the outcome of the war, assuming they stay afloat and in operation. Their influence is abstractly reflected in these possible war outcomes:

If all three ships survive until the end of the war, the Lanaxians' numerically superior ground forces score a decisive victory against the Alliance forces and occupy Alliance territory. Ling Standard Products receives rights to all Alliance minerals and becomes a major on-planet political influence, well-situated for conquering the remaining Bheroven/East Bheroven land mass.

If either surface ship is sunk before the end of the war, the Lanaxians score a marginal victory, forcing the Alliance to sue for peace. LSP gains political influence and additional, temporary mineral rights in Alliance territory. However, Alliance territory is not occupied, and some Sternmetal influence remains.

If either surface ship and the nuclear submarine sink, the Alliance scores a marginal victory, forcing Lanax to sue for peace. LSP loses political influence and must temporarily surrender its Lanaxian mineral rights to Sternmetal Horizons.

If all three ships are sunk before the end of the war, the Alliance scores a decisive victory. It occupies Lanax, and Sternmetal gains all the mineral rights in that country. Sternmetal is also well-situated to conquer the remaining nations on the Bheroven/East Bheroven land mass. And because 60% of the planet's population and 80% of its industry is located here, the nation that rules Bheroven is in a good position to conquer all Aramanx.

TAKE THE MONEY AND RUN

If the Domain of Deneb government learns that Ling Standard Products introduced fission reactors to Aramanx, it intervenes and stops the war, then throws LSP off the planet. If Lanax and LSP win, and LSP becomes known as the source of the fission reactors, LSP is thrown off Aramanx and loses hard-won mineral rights and influence. LSP feels that the PCs know too much about the fission reactors installed in the Lanax fleet and does its best to make sure they never leave Aramanx alive.

If the war ends in a Lanaxian defeat with the ships sunk, paradoxically, the characters are safe.

Should the war continue past the end of the characters' contracts, LSP representatives at first do their best to convince the PCs to sign up for another year. If this fails, or if the war ends sooner with a Lanax victory, LSP pays off the characters as promised to achieve surprise. However, immediately thereafter, LSP agents attempt to kill the PCs, forcing them to flee for their lives.

The characters have two basic choices to survive: blend in with the local population and remain on Aramanx, or flee to a neutral country such as Klavisur and take a shuttle to the orbiting starport. Once off Aramanx, they can approach the Domain government and disclose what they know for protection against LSP, or begin another series of adventures as they attempt to hide from the megacorporation.

Don't miss the ship profiles starting on the following page.
For more information, see "Wet Navy 1" (nautical vessel design rules) in **Challenge 53,** *"Wet Navy 2" (naval weapons and design sequences) in* **Challenge 54** *and "Wet Navy 3" (maritime environment and naval combat) in* **Challenge 60.**

Lanax *Talon*-Class Aircraft Carrier

CraftID:	Aircraft Carrier, TL6, MCR295
Hull:	2700/6750, Disp.=3000, Weight Loaded=20250 tons, Hull Type=Curved Displacement, Armor=18
Superstr:	528/1320 Flight Deck (Angled) Armor=18, 133/333 Island 2000 kiloliters Armor=18
Power:	23/46, Nuclear Fission, 70 MW., Endurance=360 days
Loco:	8/21, 2 Screw Propellers, Top Speed=70 kph, Cruising Speed=52.5 kph
Commo:	Radio=Planetaryx2, Continentalx2, Regionalx5 Radio Jammer=Continentalx2
Sensors:	Radar=Regionalx2, Radar Jammer=Regionalx1
Def:	12 cm hivel gunsx8 in 8 turrets, 4 cm autocannonsx80 in 20 turrets, 2 cm autocannonx80 in 40 dual mounts
Control:	Computer=1bisx2, Enhanced Mechanicalx2500
Accomm:	Crew=1627, Stateroomsx99, bunks x1358, basic environment
Other:	Fuel=30 kliter, Aviation Fuel=6272 kliters, Magazines=4300 tons aviation ordnance, 50 tons ship's ordnance. Catapults=Large fixed hydraulicx2, Hangar Deck=13056 kliters
Aircraft:	*San Diego*-class medium attack aircraftx36, *San Diego*-class medium attack aircraft two-seat variantx4, *Dodge City*-class light fighter aircraftx12, *Hartford*-class utility/SAR helicopterx2

Only aircraft carrier on Aramanx, built and operated by Lanax Navy with off-world assistance. Flies off TL7 mercenary air wing for attack missions against Senled/Lovrenyi Alliance shipping and bases.

Lanax *Equalizer*-Class Battlecruiser

CraftID:	Battlecruiser, TL6, MCR263.75
Hull:	2700/6750, Disp.=3000, Weight Loaded=20250 tons, Hull Type=Curved Displacement, Armor=31
Superstr:	400/1000, 6000 kiloliters Armor=18
Power:	12/24, Nuclear Fission, 35 MW., Endurance=360 days
Loco:	8/21, 2 Screw Propellers, Top Speed=50 kph, Cruising Speed=37.5 kph
Commo:	Radio=Planetaryx2, Continentalx2, Regionalx5 Radio Jammer=Continentalx2
Sensors:	Radar=Regionalx2, Radar Jammer=Regionalx1
Off:	36 cm hivel gunsx6 in 2 turrets, 12 cm hivel gunsx8 in 4 turrets
Def:	4 cm autocannonsx40 in 10 turrets
Control:	Computer=1bisx2, Enhanced Mechanicalx250
Accomm:	Crew=917, Stateroomsx28, bunksx823, basic environment.
Other:	Fuel=18 kliter, Aviation Fuel=20 kliters, Magazines=2000 tons Catapults=Hydraulic Turntablex2. Hangar=15 kliters. Crane=10 ton capacity on fantail
Aircraft:	*Nuremberg*-class attack aircraft variant with floatsx2, *Springfield*-class light helicopterx1

Most heavily armed wet navy ship on Aramanx, flagship of Lanax Navy.
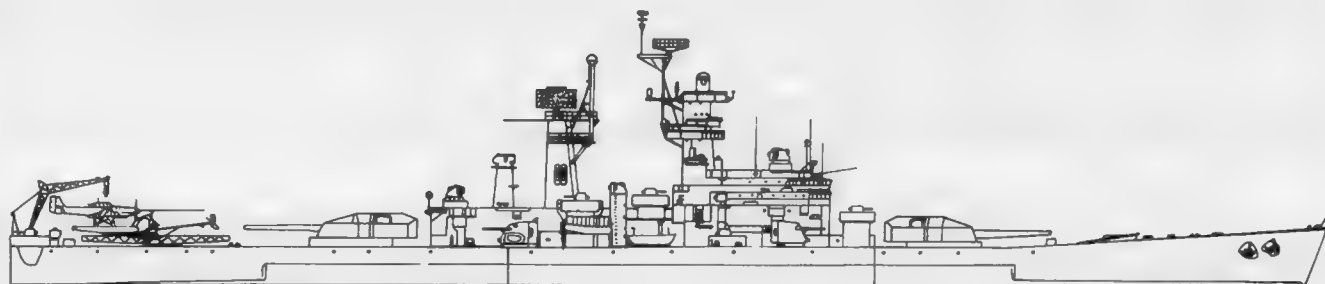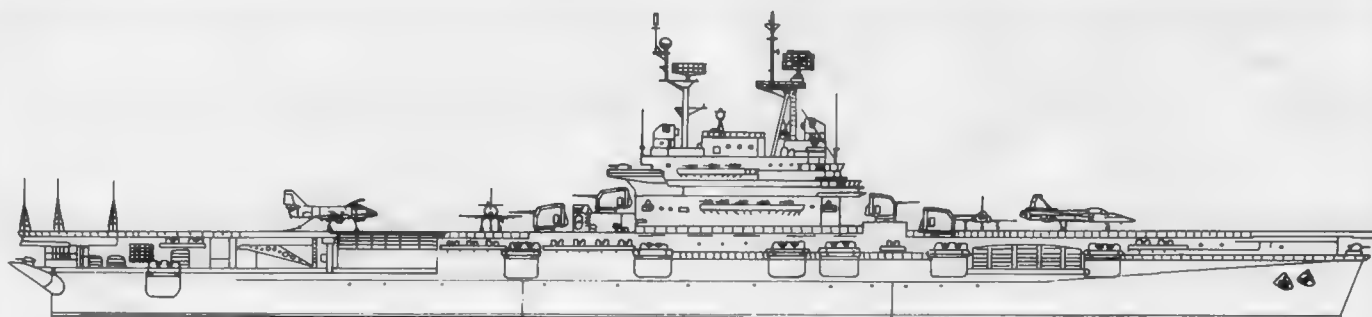
Lanax *Kraken*-Class Nuclear Attack Submarine

CraftID: Attack Submarine (nuclear), TL6, MCr38

Hull: 270/675, Disp.=300, Weight Loaded, Surfaced=3240 tons, Weight Loaded, Submerged=4252
Hull Type=Submersible, Armor=31, Maximum Diving Depth=465 meters

Superstr: 13/33, 202 kiloliters Armor=31

Power: 4/8, Nuclear Fission, 13 MW., Endurance=360 days

Loco: 1/2, 2 Screw Propellers, Top Speed=40 kph, Cruising Speed=30 kph

Commo: Radio=Planetary×2

Sensors: Radar=Regional×1, V.Distant×1, Passive Sonar=V. Distant×1
Active Sonar=V. Distant×1
Periscopes=Distant×2

Off: Torpedo Tubes×10 (6 forward, 4 aft) with Early Steam Torpedoes×26

Control: Computer=1bis×2,
Enhanced Mechanical×350

Accomm: Crew=163, Staterooms×7, bunks×150, extended life support

Other: Fuel=7 kliter radioactives, Cargo & Stores=378 kiloliters

War patrols by this submarine are limited only by available food and torpedoes. Designed for long patrols off Lowestowe to destroy Alliance shipping. First nuclear submarine on Aramanx. Power plant is TL7, built off-world.

Alliance Heavy Cruiser

CraftID: Heavy Cruiser, TL6, MCR102.1

Hull: 1800/4500, Disp.=2000, Weight Loaded=13500 tons, Hull Type=Curved Displacement, Armor=31

Superstr: 270/675 4050 kiloliters Armor=18

Power: 11/22, Diesel, 55 MW., Endurance=30 days

Loco: 8/21, 2 Screw Propellers, Top Speed=70 kph, Cruising Speed=52.5 kph

Commo: Radio=Planetary×2, Continental×2, Regional×5
Radio Jammer=Continental×2

Sensors: Radar=Regional×2,
Radar Jammer=Regional×1

Off: 20 cm hivel guns×9 in 3 turrets, 12 cm hivel guns×8 in 4 turrets

Def: 4 cm autocannons×40 in 10 turrets

Control: Computer=1bis×2,
Enhanced Mechanical×850

Accomm: Crew=835, Staterooms×28, bunks×739, basic environment

Other: Fuel=2376 kliter, Aviation Fuel=20 kliters, Magazines=50 tons Catapults=Hydraulic Turntable×2. Hangar=15 kliters. Crane=10 ton capacity on fantail

Aircraft: *Tucson*-class fighter aircraft variant with floats×2, *Springfield*-class light helicopter×1

Largest Senled/Lorvrenyi Alliance Navy ship. Often encounted on blockade duty off Lanax coast.
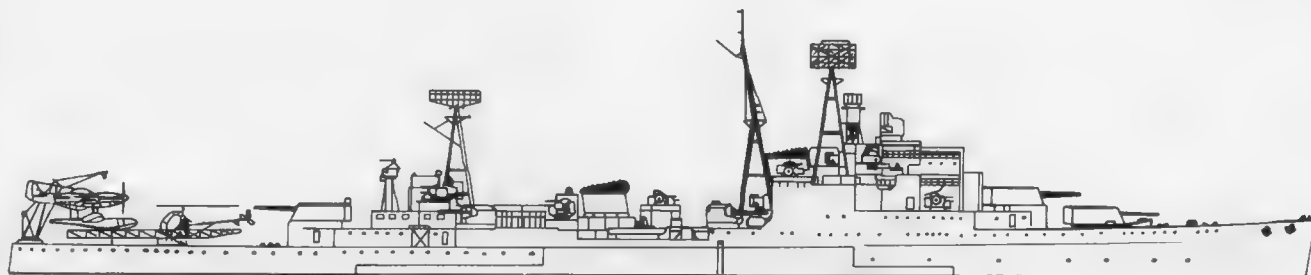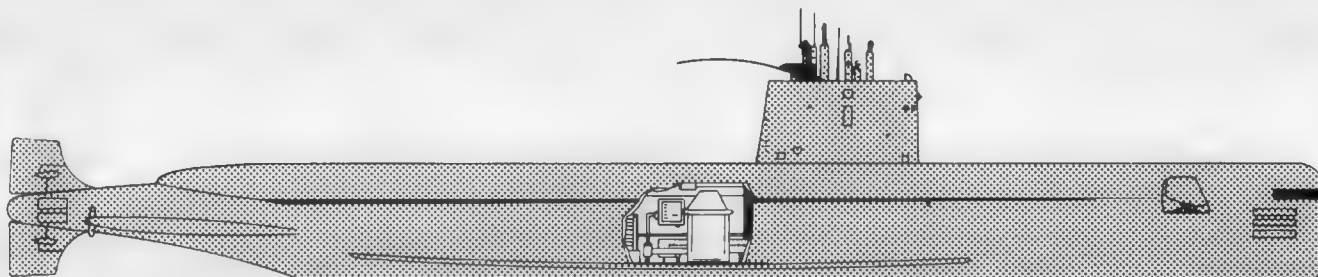
Generic Attack Submarine

CraftID: Attack Submarine , TL6, MCR21

Hull: 270/675, Disp.=200, Weight Loaded, Surfaced=2160 tons, Weight Loaded, Submerged=2713 tons Hull Type=Submersible, Armor=31, Maximum Diving Depth=465 meters

Superstr: 9/22, 135 kiloliters Armor=31

Power: 1/2, Diesel, 6 MW., Endurance=30 days on surface. 4 MW/hrs stored in 20 kiloliters of batteries provide 20 kph for 2 hours, 10 kph for 8 hours, 5 kph for 32 hours while submerged

Loco: 1/2, 2 Screw Propellers, Top Speed=40 kph surfaced, 20 kph submerged, Cruising Speed=30 kph surfaced, 10 kph submerged

Commo: Radio=Planetary×2

Sensors: Radar=Regional×1, V.Distant×1, Passive Sonar=V. Distant×1
Active Sonar=V. Distant×1
Periscopes=Distant×2

Off: Torpedo Tubes×10 (6 forward, 4 aft) with Early Steam Torpedoes×26

Control: Computer=1bis×2, Enhanced Mechanical×168

Accomm: Crew=104, Staterooms×7, bunks×91, extended life support

**Other:** Fuel=86.4 kliter hydrocarbons, Cargo & Stores=378 kiloliters

First submarines built on Aramanx. Used by Alliance to blockade Lanax ports and raid Lanax commerce. Lanax versions are known as the *City* class.

Generic Light Cruiser

CraftID: Light Cruiser, TL6, MCR69.53

Hull: 900/2250, Disp.=1000, Weight Loaded=6750 tons, Hull Type=Curved Displacement, Armor=26

Superstr: 90/225, 1350 kiloliters Armor=18

Power: 8/16, Diesel, 40 MW., Endurance=60 days

Loco: 3/8, 2 Screw Propellers, Top Speed=70 kph, Cruising Speed=52.5 kph

Commo: Radio=Planetary×2, Continental×2, Regional×5
Radio Jammer=Continental×2

Sensors: Radar=Regional×2, Radar Jammer=Regional×1

Off: 16 cm hivel guns×12 in 4 turrets, 12 cm hivel guns×8 in 4 turrets

Def: 4 cm autocannons×40 in 10 turrets

Control: Computer=1bis×2, Enhanced Mechanical×525

Accomm: Crew=685, Staterooms×28, bunks×589, basic environment

Other: Fuel=3456 kliter, Aviation Fuel=20 kliters, Magazines=3500 tons Catapults=Hydraulic Turntable×1. Hangar=15 kliters. Crane=10 ton capacity on fantail

Aircraft: *Tucson*-class fighter aircraft variant with floats×1

High endurance and ammunition capacity makes this design a commerce raider used by both warring navies on Aramanx. The light cruiser accompanied by one to six destroyers forms raiding task force used to intercept commerce off Lowestowe.

Lanax versions named as *Hero* class.
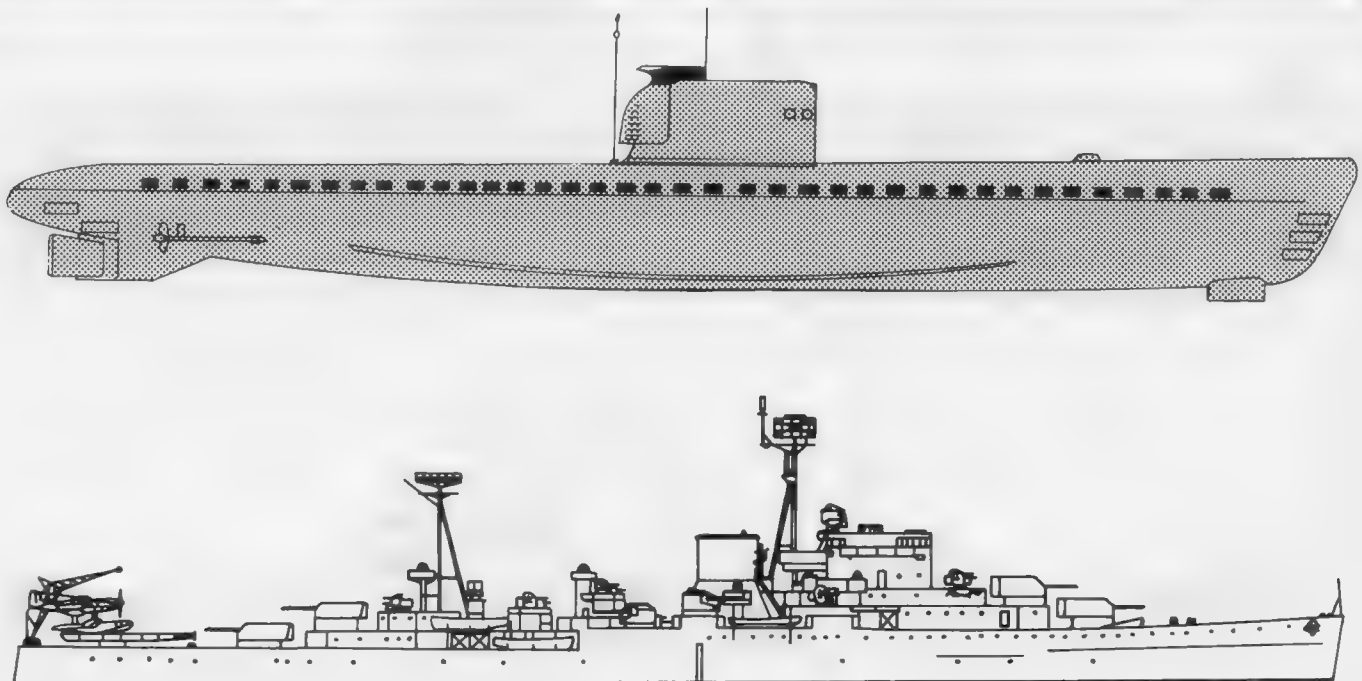
Generic Destroyer

CraftID:	Destroyer, TL6, MCR23.9
Hull:	270/675, Disp.=300, Weight Loaded=6750 tons, Hull Type=Curved Displacement, Armor=12
Superstr:	54/135, 810 kiloliters Armor=4
Power:	8/16, Diesel, 40 MW., Endurance=14 days
Loco:	1/2, 2 Screw Propellers, Top Speed=75 kph, Cruising Speed=56.25 kph
Commo:	Radio=Planetary×2, Continental×2, Regional×5 Radio Jammer=Continental×2
Sensors:	Radar=Regional×2, Passive Sonar=V.Distant×1, Active Sonar=V.Distant×1
Off:	12 cm hivel guns×4 in 2 turrets, Deck-mounted torpedo tubes×4 with early steam torpedoes×4, Depth Charge racks×2 with Depth Charges×50
Def:	4 cm autocannons×8 in 4 dual open mounts
Control:	Computer 1bis, Enhanced Mechanical×87
Accomm:	Crew=176, Small Staterooms×8, half bunks×167, basic environment
Other:	Fuel=504 kliter, Aviation Fuel=20 kliters, Magazines=200 tons, Cargo & Stores=77.5 tons

Used in commerce-raiding and blockading task groups by both navies on Aramanx.

Lanax versions are known as *Battle* class.

Generic Frigate

CraftID:	Frigate, TL6, MCR22.65
Hull:	180/450, Disp.=200, Weight Loaded=1350 tons, Hull Type=Curved Displacement, Armor=12
Superstr:	45/112, 675 kiloliters Armor=8
Power:	2/4, Diesel, 9 MW., Endurance=21 days
Loco:	1/2, 2 Screw Propellers, Top Speed=50 kph, Cruising Speed=37.5 kph
Commo:	Radio=Planetary×2, Continental×2, Regional×5 Radio Jammer=Continental×2
Sensors:	Radar=Regional×1, Passive Sonar=V.Distant×1, Active Sonar=V.Distant×1
Off:	12 cm hivel guns×2 in 2 turrets, Depth Charge racks×2 + Depth Charge Throwers×4 with Depth Charges×100, Anti-submarine mortars×10 with mortar bombs×100
Def:	4 cm autocannons×4 in 2 dual open mounts
Control:	Computer 1bis, Enhanced Mechanical×13
Accomm:	Crew=85, Small Staterooms×8, half bunks×70, basic environment
Other:	Fuel=273 kliter hydrocarbons, Magazines=200 tons, Cargo & Stores=47 tons

Used as merchant convoy escort by both navies on Aramanx.

Lanax frigates are known as *Province* class.
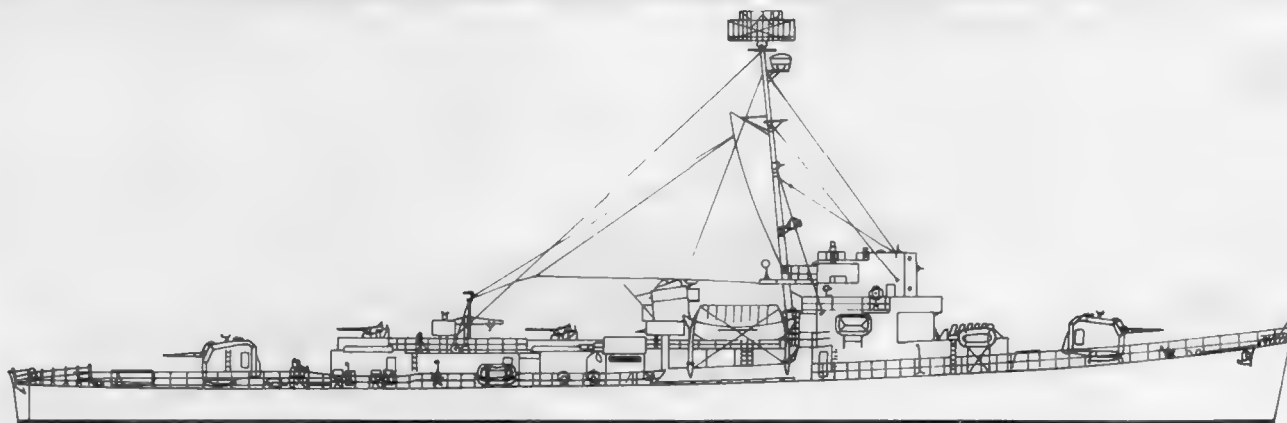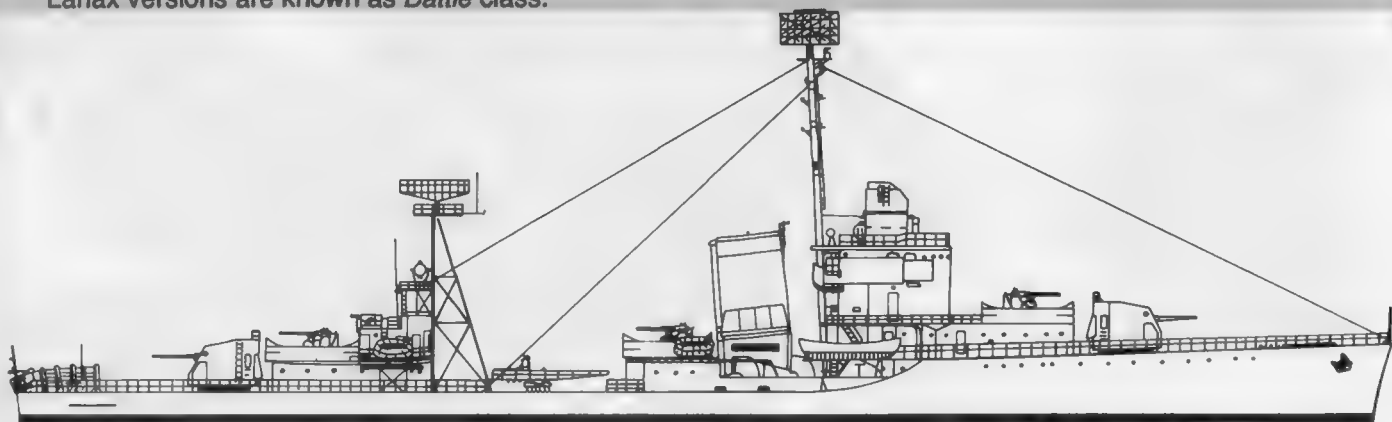
Generic Freighter

CraftID: Freighter, TL6, MCR1.49

Hull: 900/2250 Disp.=1000, Weight Loaded=10125 tons, Hull Type=Parallel Displacement, Armor=1

Superstr: 90/225. Deckhouse located aft. 1350 kiloliters Armor=1

Power: 2/4, Diesel, 10.2MW., Endurance=30 days

Loco: 1/2, 1 Screw Propeller, Top Speed=30 kph, Cruising Speed=22.5 kph.

Commo: Radio=Planetary×1

Sensors: Radar=V.Distant×1

Control: Enhanced Mechanical×212

Accomm: Crew=56, Small Staterooms×9, bunks×45, basic environment, Passengers=12, Small Staterooms×12

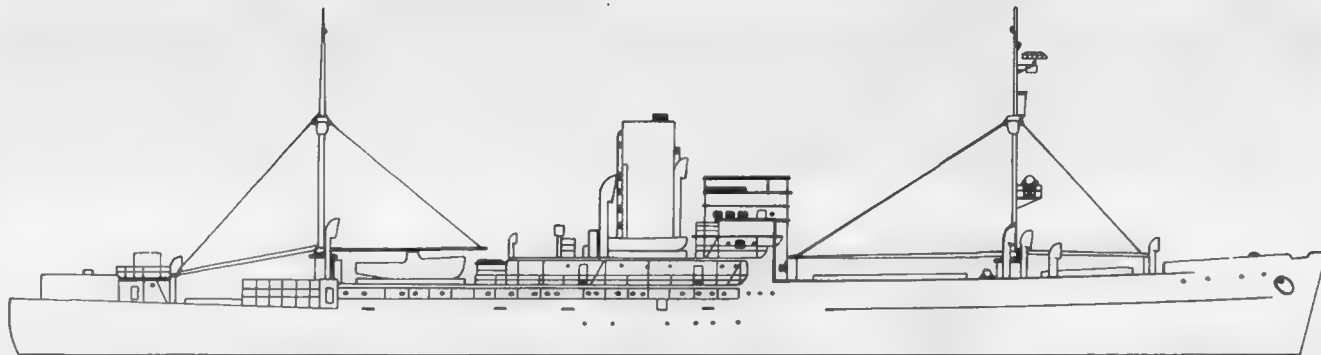**Other:** Fuel=489.6 kliter hydrocarbons, Cargo=6242 metric tons

Common wet merchant ship used by many nations on Aramanx.
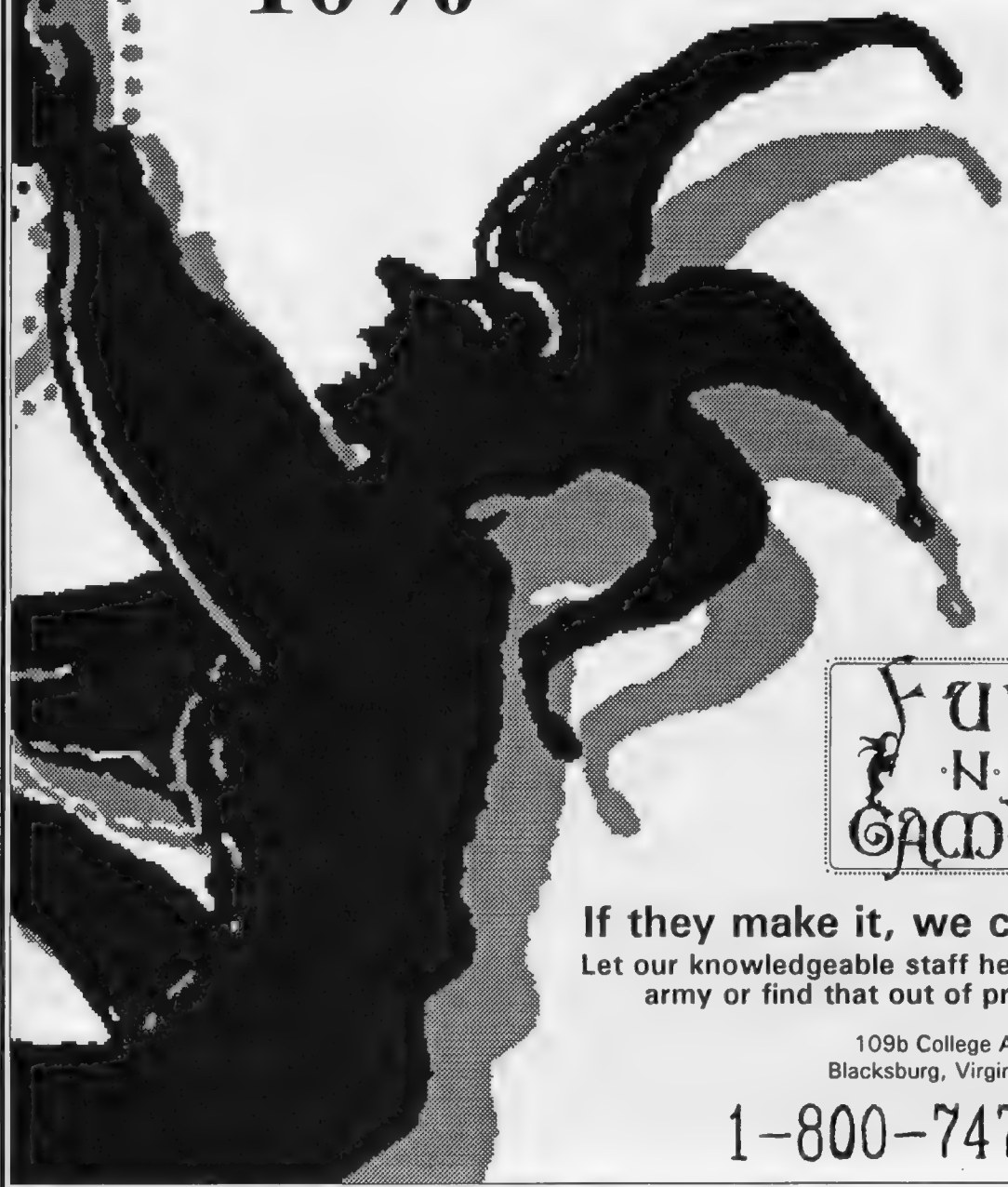
Mercenary Aircraft
Dodge City Light Jet Fighter

CraftID: Jet Fighter, TL8, MCR1.5

Hull: 48/120, Disp.=20, Weight Loaded=12 tons, Airframe=Supersonic, Armor=0

Power: 4/10, Gas Turbine, .60 MW., Endurance=1 hour, 4 min on internal fuel; 2 hour, 6 min with internal fuel and drop tank

Loco: High Performance Turbofan, Thrust=21 tons, Cruise=1485, Top=1980, Agility=6

Commo: Radio, Regional×1

Off: 2 cm autocannon×2 Fixed forward firing /200 rounds per gun. Plumbed fuselage hardpoint. Wingtip launch rails×2

Control: Powered, 2 Manuever Points

Accomm: Crew=1 (Pilot), Basic life support with oxygen mask and tank backup, complex cockpit with advanced ejection seat

Other: Fuel=2040 liters. 1 2000 liter drop tank may be carried beneath fuselage

Relatively inexpensive, very agile, light-weight fighter popular among mercenary air squadrons as air superiority fighters and attack aircraft escorts. This model's small size makes it hard to spot visually during air-to-air combat and easy to ship aboard starships. Reconnaissance variant with integral nose cameras and a two-seat training variant are also available.

WOOD & WIND STEEL & STEAM
Early Tech Design Supplement

By Charles E. Gannon

The UCP design sequence in the **Referee's Manual** reflects the interstellar-level technological focus of the pre-Rebellion Imperium. But in the Hard Times era of 1125-1130, many of those items have been destroyed, and those that remain are clustered in the Safes or Frontiers, or in the hands of local governments. New technologies are being produced to fill the void, but a great many of these postwar products are extremely primitive.

Step 1: Basic Hull Design

CRAFT CONFIGURATION AND STREAMLINING (1/5)

STOL/VTOL Craft: Referees may modify the hulls of aircraft and spacecraft so they are VTOL or STOL capable. VTOLs need no runway, and STOLs need only very short stretches of level ground in order to conduct routine operations. Other performance advantages of VTOL/STOL designs can be found in COACC.

VTOL hulls add 10% to the weight and 50% to the cost of the hull. They become available at TL7. STOL hulls add 5% to weight and 30% to the cost of the hull. They become available at TL6.

ARMOR (1/7)

Early-tech hull materials often have a poor hardness: weight ratio. Therefore, you must calculate their hardness and weight separately. In the table below, all armors with a hardness rating of 1 can follow the procedures outlined in the UCP design sequence without modifications, ignoring any calculations that involve hardness. Hulls constructed from any material with a hardness rating of less than 1 must use the following procedures when determining their design characteristics.

Step 1: Hull Thickness: After selecting a hull from the Basic Hull Design Table, decide on the thickness in centimeters. The minimum permitted thickness (regardless of the hull material selected) is 0.25 cm.

Step 2: Hull Weight: Find the UCP basic hull weight and multiply it by the appropriate weight modifier from the revised Hull Materials Table. Multiply this value by the hull's actual thickness in centimeters. The result is the hull's true weight.

Step 3: Hull's Armor: To determine the hull's armor value, multiply the hull material's hardness modifier by the hull's thickness in centimeters. The result is the hull's equivalent armor modifier.

The equivalent armor modifier defines the resistance of the hull in terms of its equivalent value in centimeters of hard steel. The armor factor corresponding to the armor modifier is the hull's armor value. See the Armor Table in the Basic Hull Design section (**Referee's Manual**, page 63) for more on armor factor ratings.

Armor Modifiers of Less than 0.25: It is possible to build a hull with an armor modifier of less than 0.25. However, such hulls have no resistance to penetration by missiles (an armor rating of 0). They have some resistance to less powerful blows and impacts.

This is represented as an armor rating against melee attacks. The following table indicates the correspondence between armor modifier values and melee armor ratings.

No hull may be constructed with an armor modifier of less than 0.05. Such a hull is structurally unsound.

Armor Modifier (rated in cm of steel)	Melee Armor Rating
[1]	0.05
[2]	0.1
[3]	0.15
[4]	0.2

Step 2: Power Supply
POWER SUPPLY (2/1)

Several new forms of power are available, including muscle power, sails, rotary sails, steam engines, diesels and hydrogen combustion.

Muscle Power (2/1a)

This is the most basic power source, available at TL0. Muscle power can be used to tow vehicles, and can be converted into mechanical energy by the manipulation of levers, cranks, turnstiles and treadmills. This mechanical energy can then be used to power locomotion systems. The amount of power generated is determined by the number of workers, their species and their skill.

Towing Muscle Power: The towing power generated by a creature is determined by its weight and body construction. Creatures with four or more legs enjoy a strong advantage when towing objects—more of their total body mass and strength is effectively in contact with the ground. Determine the power in watts a towing creature can generate as follows:

Three or Fewer Legs: Body weight (kg)×2.5=watts.
Four or More Legs: Body weight (kg)×5= watts.

Towing creatures that are stored inside a vehicle require a volume allotment of 1 kl per 10 kg of creature mass. If they are outside the hull, they require no volume or other considerations, but since they are not protected by the hull's armor, they are very vulnerable to all forms of attack.

Mechanically Transferable Muscle Power: Any species capable of generating mechanical power via muscular work generates a number of watts equal to one-half the species' average weight in kilograms. For humans, the average is 35 watts when generating mechanical power.

Working Ability: Basic wattage values can be modified by an individuals' working ability. Working ability is determined by totaling the die modifiers an individual receives as a result of his Strength attribute and Endurance attribute. For each point of working ability, an individual can increase his basic mechanical power output by 40%. So an average human with STR 7 (DM+1) and END 7 (DM+1) has 2 points of working ability. So his basic mechanical power output is increased by 2×40% or 80%. In the case of a human, this would mean: 35 watts basic output×1.8=63 watts total mechanical power. Values for average Vargr and Aslan workers are indicated below:

Species	Average Mass	Basic Wattage	Average Individual
Vargr	55	27.5	50
Aslan	100	50	9

Hull Materials (1/7) Revised			
TL	Hull Material (and UCP code)	Hardness Modifier	Weight Modifier	Price Modifier
0[1]	Cured hides (Z)	0.02	0.15	0.5[3]
0[1]	Bone/light wood (Y)	0.005	0.05	0.15[3]
1[2]	Wood (W)	0.025	0.1	0.2[3]
4	Iron (I)	1	1.35	11.1
5	Soft steel (A)	1	1.25	1
6	Hard steel (B)	1	1	1
7	Compos. lam. (C)	1	0.44	1.8
7	Aluminum (Ca)	0.5	0.4	1.2
7	Fiberglass (Cf)	0.125	0.05	1.2
8	Titanium alloy (Ct)	1	0.4	1.4
9	Light compos. lam. (D)	1	0.35	1.6
10	Crystaliron (E)	1	0.31	1.1
12	Superdense (F)	1	0.26	1
14	Bonded superdense (G)	1	0.16	1

[1]Hulls constructed of this material cannot maintain pressure integrity in undersea or vacuum environments.

[2]Hulls constructed of this material cannot maintain pressure integrity in vacuum.

[3]For material purchased commercially. Material may be harvested for free in appropriate biospheres. If the material is harvested from local sources, the ship's total construction time is *doubled*.

Highly fit individuals can easily double the basic level of output. Professional work crews can be assumed to produce two times the wattage of average individuals.

Muscle Engines: Muscle engines are mechanisms that convert mechanically transferable muscle-power to useable wattage. They are of two basic types: levers/cranks and turnstiles/treadmills.

Levers/Cranks: Available at TL3, these devices can only be used by sophonts or creatures which can be trained to perform a repetitive, nonindustrial physical task. All workers require at least cramped crew positions. Species that are much larger or smaller than humans may have greater or lesser requirements: approximately 1 kl of space per 40 kg (or fraction thereof) of average weight. Levers and cranks have insignificant volume, weight and monetary costs.

Turnstiles/Treadmills: These devices are available at TL1 and can be powered by any type of creature that has a movement rate of greater than 0. All workers require 1 kl of space per 10 kg of weight. Therefore, an average human (weighing 70 kg) would require 7 kl of space. Turnstiles/treadmills have insignificant volume, weight and monetary costs.

Sails (2/1b)

Wind pressure against sails generates power capable of pushing vehicles forward. The amount of power generated is determined by the sail area and the force of the wind.

The following information is similar to the data presented in the wet navy design supplement. However, there are important distinctions, since the early tech data deals with land vehicles, not sailing ships.

Sail Area: The total sail area determines the maximum amount of force available to power a sail-equipped craft. The sail area depends on the height and number of the craft's masts and the length of the yards (beams that run at right angles to the mast).

Number of Masts: All craft may mount at least one mast. Additional masts my be added if the hull is large enough. Determine the minimum hull displacement (in tons) required to mount a given number of additional sails as follows: $(x^3) \times 10$, where x equals the number of *additional* sails desired.

For example, a craft with three masts requires enough space for two additional masts. The minimum hull size permitting this is 80 displacement tons (x=2 additional masts, $2^3=8$, $8 \times 10=80$ displacement tons).

Mast Height and Yards: Maximum mast height in meters for a craft equals two times the square root of its hull displacement. Maximum mast height for any vessel is 50 meters. The length of a yard may be up to 50% of the mast height.

For example, a vehicle with a UCP 20 hull could mount two masts. Maximum mast height would be approximately nine meters, which means the yards could be a maximum of 4.5 meters in length.

Calculating Sail Area: To calculate sail area, multiply the height of the mast by the length of the yard. Multiply the result by the number of masts. Add 10% to the total to allow for stay sails rigged between the masts.

Let's return to the preceding example. Our 20-ton vehicle has two masts. The sail area per mast is 9×4.5 (mast height×yard length) or 40.5 square meters. The total sail area of both masts is 91 square meters. Adding the additional sail area (10%) from the stay sails (nine meters) produces an total sail area of 100 square meters.

Sail Force: The force generated by wind on sails in a standard atmosphere is determined as follows: force in kilowatts=1.3×sail area×wind velocity (meters per second).

In other words, wind blowing at one meter per second exerts a force of 1.3 kw on one square meter of sail. Wind velocity is usually measured in kph, but can be easily converted to mps using the following equation: wind velocity in mps=wind velocity in kph×0.28.

On a world with a dense atmosphere, multiply the resulting force by 1.5. On a world with a thin atmosphere, multiply by 0.75. Sails are impractical on worlds with very thin or trace atmospheres.

When the power output (in kw) of wind on a vehicle's sails exceeds the craft's hull volume (in kl), the sails begin to take damage equal to 1 point per kilowatt of excess power. In rough weather, sails should be reduced (shortened or stowed away) to prevent this kind of damage.

Sail Costs: Sails cost Cr100 per square meter.

Sail Weight: Sails weigh approximately 1 kg per square meter. When sails are wet, increase their weight to 2 kg per square meter. Synthetic sails (available at TL7) weigh 0.9 kg per square meter, wet or dry. Extra-strength synthetic (available at TL8) weigh 0.3 kg per square meter, wet or dry.

Sail Stowage Volume: Sails require 1 kl of volume for every 25 square meters of sail area when stowed. They may also be furled and left on the yard arms. Synthetic sails require 0.5 kl of volume per 25 meters, and extra-strength synthetics require 0.3 kl per 25 square meters.

Mast Weight and Cost: Wooden masts weigh 15 kg and cost Cr15 per meter of height. Iron masts, available at TL4, weigh 0.125 tons and cost Cr100 per meter of height. Steel masts, available at TL5, weigh 0.1 tons and cost Cr100 per meter. Titanium masts, available at TL7, weigh 60 kg and cost Cr200 per meter.

Auxiliary Power: Sails need not be the vehicle's only source of power and locomotion; auxiliary systems can be added on as space, weight, tech level and cost allowing.

Rotary Sails (2/1c)

Rotary sails are based on the same principle as windmills and become available at TL2. A rotary sail has two yards, placed perpendicular one another.

Imagine the mast of the rotary sail as a y-axis or vertical axle. One yard lays along the x-axis, the other along the z-axis. With sails in place, the two yards create four tall vanes arranged turnstile fashion about the mast/axle. This apparatus is enclosed within a columnar screen. The columnar screen has one narrow aperture that runs from the top to the bottom of the screen. The screen is rotated so that this aperture always faces the wind. The aperture funnels the wind in toward the vanes. The wind pressure against the vanes causes the mast/axle to rotate.

Rotary sails tend to occupy a great deal of volume, although they are not very heavy. Most of their volume is on the outside of the vehicle hull; only a small portion is subtracted from the available hull volume.

Designing Rotary Sails: Any craft may mount at lest one rotary sail. Additional rotary sails may be added at the rate of one per 1000 kl of hull volume. A vehicle that mounts both standard sails and rotary sails must use the design limitations for the maximum number of *additional* sails when calculating the total number of both standard and rotary sails it is permitted to mount (see the Number of Masts section above). Therefore, a vehicle that may mount a total of three masts can have either two standard sails and one rotary, or vice versa. In vehicles with such mixed sail arrangements, the "one per 1000 kiloliters" rule for rotary sails is ignored.

Sail Area: Determine the height of the rotating mast according to the rules used for normal sails. However, rotary sails do not really have yards but are instead equipped with vanes.

The maximum length of each vane is the quad root of the hull's volume in kiloliters. This is the *only* factor which limits the length of a rotary sail's vane. So a hull with a 16 kl volume cannot have a rotary sail with vanes more than two meters long. However, the vanes can be two meters long even if the rotary sail's mast is only one meter high.

Determine a rotary sail's area (in square meters) using the following equation: length of vane×height of mast=sail area.

The width of a rotary sail is equal to twice the length of its vanes (i.e., a single vane defines the radius of the structure, not the diameter). To determine the total volume of a rotary sail (in kiloliters), use the following equation: $0.785 \times (2 \times \text{length of vane})^2 \times \text{mast height}$.

Only 20% of the rotary sail's total volume is subtracted from the available hull volume. The rest of the

Power Plant Table (2/1) Additions

TL	Type	PowOP (mw/kl)	Price	Weight	Min. Vol.	Fuel (kl/hour)	Fuel Type
3	Primitive Steam						
	Reciprocating	0.03	2000	4	0.25	0.12	Hydrocarbon (S)*
4	Early Steam						
	Reciprocating	0.08	2000	2	0.15	0.06	Hydrocarbon
5	Steam						
	Reciprocating	0.12	3000	4	0.1	0.04	Hydrocarbon
5	Steam Turbine	0.30	5000	2	0.20	0.035	Hydrocarbon
6	Diesel	0.3	2000	2	0.005	0.02	Hydrocarbon
7	Exothermic						
	Power Cell	7.0	35,000	0.5	0.001	4.5	Exothermic
8	Hydrogen						
	Combustion	0.6	16,000	2	0.3	0.002	Hydrogen

Values are per kiloliter.

*This engine can only be built to accept solid hydrocarbons.

rotary sail's volume is external. Add the rotary sail's external volume to the craft's hull volume. Compare this total to the UCP Hull Table volume ratings (**Referee's Manual**, page 62). Find the hull volume which just equals or exceeds this total (i.e., the vehicle's hull volume plus the external volume of the rotary sail). The displacement rating that corresponds to this total volume is the vehicle's new displacement rating. This change only affects the hull's displacement rating; weight, cost and armor are not affected. Note, however, that the inclusion of a rotary sail will cause any vehicle's configuration to become unstreamlined.

The total volume (both internal and external) of all the vehicle's rotary sails (if more than one is mounted) must not exceed 200% of hull volume.

Cost and Weight: A rotary sail costs Cr700 and weighs 8 kg per square meter of sail.

New Power Plants (2/1)
The table lists additions to the Power Plants Table on page 64 of the **Referee's Manual**.

Fuel Options: Steam engines of all types can be designed to use solid hydrocarbons instead of regular hydrocarbon fuels. Steam engines of TL3 and 4 can *only* use solid hydrocarbons.

Scale Efficiency (2/2)
The items listed in the table are to be added to the Scale Efficiency Table. Diesel and hydrogen combustion engines are considered to be internal combustion engines.

Descriptions of New Power Plants
Exothermic Power Cells: These batteries are conceptual precursors of fuel cells. They generate

power by combining two (or more) extremely volatile reactant fuels in an exothermic reaction. Power generation is quite high, but the fuel costs tend to bias the use of this technology for short-duration application (one-shot drone lasers, for example).

Hydrogen Combustion Engine: The hydrogen combustion engine offers a clean energy alternative utilizing a plentiful fuel at TL8. However, the cryogenic storage containers necessitated by the liquid hydrogen fuel, as well as the heavy structure of the engine, make it less efficient at these early tech levels. Further advancement in this technology is generally circumvented by the arrival of fuel cells and fusion plants.

Early Batteries (TL3–4): Early chemical batteries are very inefficient, storing only 0.00005 mw hours per 0.0001 kl of batteries. These batteries weigh six tons per kiloliter. In other respects, they are similar to later model batteries.

Step 3: Locomotion
EARLY CONTACT-BASED SUSPENSION ADDITIONS (3/7)

Suspension	TL	Power	Weight	Price
Sled/runner	0	.06	.3	50
Primitive wheel	0	.01	.6	100
Early wheel	1	.002	.4	250
Simple wheel	2	.001	.3	300
Wheel	4	All values as per **Referee's Manual**.		

Values are per kiloliter of suspension.

Early-tech wheels are light and fragile. TL4 wheels are identical to TL5 wheels as presented in the **Referee's Manual**. The sled/runner suspension cannot be used in conjunction with a transmission; it only enables the vehicle to be pushed or pulled more easily. It can be used with standard sails.

Outboard Suspensions: Wheeled and tracked suspensions may be built as outboard models. Outboard suspensions are literally located external to the hull of the vehicle (wheels protruding out beyond the periphery of the chassis and body). Outboard suspensions do not require any hull volume, but they are much more fragile than standard suspensions. Many early vehicles (wagons, etc) utilize outboard suspensions to maximum the carrying capacity remaining within the hull. Outboard suspensions must never exceed 100% of the hull's volume in kiloliters or 20% of the rest of the vehicle's mass.

CONTACT-BASED TRANSMISSION ADDITIONS (3/8)
Transmissions for use with early-tech wheels are listed in the table below.

Step 4: Communicators
PRIMITIVE COMMUNICATORS (4/6)
Early Tech Communications: At TL0, only signal flags and acoustic magnifiers (large wooden bullhorns) are available as communication systems. They have no real weight, cost or volume requirements. Other methods (such as signal fires) are dependent on available time and weather conditions, and are not standard equipment.

At TL1, the heliograph becomes available. Heliographs are comprised of a bright light source, large reflector, focusing tube and tinted glass lenses. Messages are transmitted by color-coding or on-off Morse code signalling (usually achieved by covering and uncovering the light source).

Communicator	Range*	Mass	Cost
Heliograph	1 km	0.035	Cr3

Values are per 0.05 kiloliters of volume.

*Heliographs are line-of-sight communication systems and can be obstructed by terrain features, inclement weather and similar blockages. Distance to horizon is generally the practical maximum operating range on any given planet (unless communications are being directed from one mountaintop to another or are being sent overhead).

Step 5: Sensors and Electronics
RADIO DIRECTION FINDERS (5/6A)
Radio direction finders become available at TL5. They have the same characteristics (cost, weight, volume, etc.) as regional range radios.

Refer to the table below for miscellaneous additions.

The first practical sensor is the lodestone, the forerunner of the compass. These magnetic direction-finding devices are not included on this chart since they are quite small, and usually readily available.

Ground-glass lenses for telescopes become available at TL1 and continue to progress in power and sophistication as tech levels increase. The models included here are not the portable variety (which are smaller and lighter, and have less resolving power). These telescopes are usually mounted in the vehicle's

---

Scale Efficiency (2/2)

Plant Type	Large Plants Efficiency Increase		Small Plants Efficiency Decrease	
	Volume (kl)	Output Mod	Volume (kl)	Output Mod
Steam Engines	25+	×1.5	10.0–	×.0.33

Contact-Based Transmission Additions (3/8)

	TL	Volume	Weight	Price	Kph Bonus if Light Vehicle
Primitive wheel	0	10	10	2000	None
Early wheel	1	7	7	5000	+2 kph
Simple wheel	2	5	5	5000	+6 kph
Wheels*	4	3	3	3000	

Values are per megawatt of power plant output.

*The basic wheel transmission available at TL4 is identical to the wheel transmission presented for TL5 on page 66 of the **Referee's Manual**.

Miscellaneous Sensors, Early-Tech Additions (5/13)

TL	Description	Power	Volume	Weight	Price
1	Telescope (4×)	—	.01	.01	1000
2	Telescope (10×)	—	.01	.01	1000
2	Anemometer	—	—	.005	350
3	Telescope (20×)	—	.01	.01	1000
4	Telescope (50×)	—	.03	.04	1500
4	Carbon-arc search light	.005	.05	.7	700

bridge or at gunnery positions.

Although wind direction and approximate velocity can be gauged beginning at TL0, precise measurements are made possible by the delicate gearing and precision crafting of the anemometer (TL2). Anemometers aid in weather prediction, optimal use of all kinds of sails and windage adjustments for projectile weapons.

Another major TL1 development not included here (due to small size and ready availability) is the astrolabe, a navigational observation. Users must have an intimate knowledge of any given world's night sky in order to use an astrolabe.

The first practical electric illumination is the carbon-arc light. It provides a cone of intense, blue-white light, ushering in the age of night detection and combat. Carbon-arc lights are often fitted with heliographic shutters, allowing them to be used as semaphore signaling devices.

Step 6: Weapons
TORSION PROJECTILE WEAPONS (6/19b)

All torsion projectile weapons become available at TL1. See the table below.

Catapults: Catapults launch their missiles in a high-angle trajectory and are difficult to use against moving targets (+1 task difficulty level). They are quite effective in battering down walls and shelling towns.

Ballista, Mangronel, Scorpion: All these weapons are based upon the crossbow principle. The ballista is simply a very large crossbow (ammunition masses 4 kg). The mangronel is a wide-bowed variation which launches a cluster of javelins (massing 0.7 kg each). The Scorpion is a much smaller version of the ballista and launches a single spear (massing 1.5 kg).

When using these weapons systems in a vehicle design, include space for ammunition (1 kl for 10 firings of any weapon) and include the weight of the rounds.

MORTARS AND LOW-VELOCITY CPR ROUNDS (6/20&21)

CPR guns first become available at TL2. From TL2-4, all CPR weapons use the Howitzer Table to determine their characteristics, even if they are direct-fire weapons. It is not until TL5 that true high-velocity CPR weapons become available.

To determine the characteristics of early-tech CPR weapons, use the charts from steps 6/20 and 6/21 (page 76 of the **Referee's Manual**), with the following modifiers:

Tech Level 2: All weapons are only 50% of the listed price.

All weapons have their range reduced by one band (Distant becomes Very Long).

Divide ROF by 20 Ammunition weight is only 30% of the listed weight.

Only KEAP ammunition is available. Determine the penetration of the round by reading up *four* rows. If there are less than three preceding rows, the weapon's penetration is 0.

Penetration attenuation is reduced by 1. Damage of the round is not altered.

Mortars are not permitted at this tech level.

For example, a 10 cm TL2 cannon would have a range of Very Long, a Penetration of 3 and an attenu-

ation rating of 3. Damage is not altered, so the 10 cm value of 14 is still the Damage rating for the weapon.

Tech Level 3: All weapons are only 35% of the listed price.

All weapons have their range reduced by one band (Distant becomes Very Long).

Divide ROF by 10.

Ammunition weight is only 50% of the listed weight.

HE, KEAP and Grapeshot ammunitions are available. Determine the Penetration of the round by reading up *three* rows. If there are less than three preceding rows, the weapon's Penetration is 1.

Attenuation is reduced by *one*. Damage of the round is not altered.

Mortars read up an extra *three* rows when determining the Penetration and Damage values of their ammunition.

Tech Level 4: Divide ROF by 2.

HE, KEAPER, KEAP and Grapeshot ammunitions are available at standard costs. Incendiary rounds are available at *twice* the standard costs. Determine the Penetration of the round by reading up *one* row. If there is no preceding row, the weapon's Penetration is 1.

A special type of CPR gun is available at this tech level—breech-loading rifles. These weapons cost twice the listed price and have double the maximum range in kilometers (range in kilometers is the value in parentheses that immediately follows the weapon's range band rating on page 76 of the **Referee's Manual**).

Mortars read up an extra *two* rows when determin-

ing the Penetration and Damage values of their ammunition.

New Ammunition Type—Grapeshot: Grapeshot is analogous to oversized shotgun ammunition. Multiple pellets are fired directly from the muzzle of the weapon. Grapeshot ammunition has the same characteristics (and uses the same rules) as a flechette shell of identical bore size. However, the danger space of grapeshot begins at muzzle of the firing gun.

Step 7: Bridge
ENVIRONMENTAL CONTROL ADDITIONS (8/1)

Throughout the Imperium's history, TL4 worlds have had to cope with the rigors of unfriendly environments and survive over long periods of time without significant outside help. Generally, this is accomplished with hydroponics. However, hydroponics consumes a great deal of space and weight, and is, therefore, generally used only on very large vehicles or in support of a fixed community.

Direct Solar Energy for Hydroponics: If a direct solar source is available, ambient sunshine provides 0.002 mw per square meter of transparent panel. Installing transparent panels on a vehicle's hull costs nothing extra, but it increases the severity of all mishaps occurring on (or damage inflicted upon) the hull by one level of severity. The square root of the hull's volume in kiloliters equals the maximum number of square meters of transparent panels it may have. The sum total of square meters occupied by solar panels and transpar-

Torsion Projectile Weapons (6/19b)

Type	Pen	Damage	Maximum Range	Difficulty As	Volume	Weight	Price
Light Catapult			Very long (0.6)	Indirect	25	1.2	2300
Stones	5	4			—	0.03	
Javelin	7	3			—	0.004	
Firepot	Nil	Fire/1.5*			—	0.007	
Catapult			Distant (1)	Indirect	60	2.6	3500
Stones	7	5			—	0.13	
Javelin	9	3			—	0.01	
Firepot	Nil	Fire/3*			—	0.007	
Ballista	4/2	4	Very long	Rifle	10	0.75	1500
Mangronel	3/2	2/1.5*	Long	Rifle	5	0.55	1400
Scorpion	3/2	2	Long	Rifle	3	0.35	1000

*The number following the slash indicates the danger space of the round. Firepots splash burning oil or naptha in their danger space. Mangronels throw clusters of javelins, affecting the areas adjacent to their target.

Hydroponics
Minimum Size of System

TL	Type	Power	Volume	Weight	Price	Units
4	Basic hydroponics life support	.001	3	3	400	Per crewmember
4	Extended hydroponics life support	.025	80	70	10,000	Per crewmember
5	Basic and extended hydroponics life support	.02	70	60	13,000	Per crewmember

Intake compressor, basic environment and airlock are all available at TL4, but at *three times* the power, weight, volume and price costs.

Control Panel Units (8/4) Additions

TL	Type	Power	Volume	Weight	Price	CP
0	Direct	—	—	—	—	—
3	Primitive mechanical	3	1.0	0.25	100	0.2
4	Simple mechanical	4	0.6	0.15	20	0.2

ent panels may not exceed the square root of the hull's volume in kiloliters.

Control Point Requirements for Early-Tech Vehicles (8/2a): Because early-tech vehicles are simple in design, they have few control requirements.

Vehicles of TL0-2 have no CP requirements. They are equipped with direct controls (reins, tillers, guidelines, etc.) integral to the various systems being operated.

At TL3-4, only three sections are included in the control point equation (step 8/2 on page 81 of the Referee's Manual): power, locomotion and environment. All other sections have negligible control requirements or are operated via direct controls.

Normal sails incur no power or locomotion CP costs. They are always handled via direct controls, regardless of the tech level of the craft. Rotary sails may be handled as normal sails or may be designed with controls (which reduces the crew requirement).

Towed vehicles (which include those vehicles propelled by towing muscle power) have no power CP costs, regardless of tech level.

See the table below for control panel units additions.

Step 8: Accommodations
VEHICLE AND SMALL CRAFT CREW (9/2)

Vehicle crewmembers manning direct controls do not require accommodations.

Sails (both normal and rotary) require one crewmember per 10 m² of sail area (round fractions up). Rotary sails equipped with controls ignore this rule. Instead, follow the procedures for determining engineering crew requirements, as presented in the Referee's Manual.

EXTENDED ACCOMMODATION (9/9)

The most basic type of extended accommodation is the half bunk. The half bunk is a light-frame double bunk or a hammock, with just enough space for the individual's gear and provisions. Such accommodations are still found on many tightly-designed, low-tech spacecraft and submersibles.

All other accommodation ratings are the same as listed in the Referee's Manual, although at TL0-3, there are no power costs for any type of accommodation.

Type	Power	Volume	Weight	Cr
Half bunk	—	6	0.25	25

Step 9: Fuel
COST AND WEIGHT OF FUEL (10/2)

Refer to the table below. The additional fuel types are all hydrocarbons. However, each type includes important properties that make it distinct from the basic petroleum-based hydrocarbons (as presented on page 83 of the Referee's Manual).

Wood/biofibers and methanol are available on any world with a carbon-based biosphere. Ethanol must be produced from edible flora and is both more rare and more expensive. Coal is usually available on any planet that has petroleum. Methanol can be produced from methane gas, which is plentiful in the atmospheres of many gas giants.

Design Evaluation

Design evaluation is conducted in accordance with the procedures described in the Referee's Manual. The following rules are additions to that process.

LOCOMOTION DAMAGE POINTS

Sails: Divide the total sail area by 15 to calculate the inoperative level of a sail. Divide by 6 to calculate the destroyed level. Double these damage values for extra-strength synthetic sails.

If the sails are destroyed and the masts are made of wood, the vessel has also been demasted.

Early-Tech Wheels: When determining the locomotion damage of a vehicle equipped with either early wheels or simple wheels, divide the final result by 2.

Outboard Suspensions: When determining damage points for an outboard suspension, divide the

final result by 2 to reflect the increased vulnerability of the suspension.

CONTACT-BASED VEHICLES

Vehicles Without Transmissions: Vehicles which have standard sails, are towed or have sled/runner suspensions do not require transmissions of any type. These vehicles are pushed or pulled, not propelled by an on-board power plant. Calculate their performance in accordance with the procedures outlined for contact-based vehicles on page 86 of the Referee's Manual.

Sail Power and Performance: Determine several wind velocities the vehicle is likely to encounter. Calculate the sail power generated by the wind at these velocities.

You may then calculate the vehicle's speed under each of these wind conditions in accordance with the procedure outlined for contact-based vehicles on page 86 of the Referee's Manual. Normal sailed vehicles do not require transmissions, only suspensions. Sails (both types) should also have their maximum safe power output calculated and listed (i.e., the maximum output they can handle before the sails begin to take damage).

Low Power-to-Weight Vehicles: Many early-tech ground vehicles have very low power-to-weight ratios. Therefore, it becomes necessary to expand the low-end of the Speed Table as presented on page 86 of the Referee's Manual. In the case of fractional values, interpolate speed by using the following equation: $(P/W-1) \times 5 = kph$.

P/W	Kph
1	0
2	5
3	10
4	15

Light Vehicles: To determine if an early-tech vehicle is light, consult the table at left.

Sled/Runner Speed Increase: Vehicles equipped with sled/runner suspension experience a speed increase of five times when operating upon low- or no-friction surfaces, such as snow, ice or micro-grain dust deserts.

Cold-Starting and Accelerating with Steam Engines: All cold-started steam engines require five minutes before they can begin generating power. For every 50 kw of power output (or fraction thereof), they require one additional minute. Therefore, a steam engine with a maximum output of 100 kw would require seven minutes to start.

Once a steam engine has been started, it can be accelerated, which allows it to produce usable power. Steam engines require one minute to increase their power output by 50 kw. Therefore, if a 200 kw steam engine was running at only 50 kw output, it would take three minutes (of full fuel consumption) to increase its output level all the way to the maximum of 200 kw. Time requirements for acceleration are separate from cold-starting time costs.

For more on the wet navy, refer to articles by Terrence R. McInnes: "Wet Navy 1" (nautical vessel design rules) in Challenge 53, "Wet Navy 2" (naval weapons and design sequences) in Challenge 54, and "Wet Navy 3" (maritime environment and naval combat) in Challenge 60.

Cost and Weight of Fuel (10/2)			
Type	Weight	Price	Consumption Rate*
Solid hydrocarbons			
Wood/biofibers	1.0	15	×5
Coal	2.0	75	×2
Additional hydrocarbons			
Ethanol	1.0	100	×3
Methanol	1.0	30	×4

*These new hydrocarbons are consumed faster than standard petroleum hydrocarbons. Engines burning these fuels run dry much more quickly. The consumption rate indicates how much faster than standard hydrocarbons these fuels will burn. For example, if an internal combustion engine consumes 1 kl of hydrocarbons per hour, it would consume 3 kl of ethanol,= or 4 kl of methanol in that same time.)

Light Vehicles		
TL	Maximum Weight of a Light Vehicle	Kph Increase
0	None	
1	0.25 tons	+2 kph, unless primitive wheel*
2	0.5 tons	+6 kph, unless primitive or early wheel*
3	1 ton	
4	3 tons	

*If suspension is of a specified type, no speed increase is permitted.

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Out of the DEPTHS

The old house had been in my friend's family for generations. I remember her telling me all the dark stories about it and the side of her family that owned it. I always thought they were just stories. But now she and her husband are missing, and strange tidings are afoot.

One of the PCs is contacted by an old friend, Jake Calderon, who reports that a friend of his recently vanished from her home along the Maine coast. Calderon is familiar with the PCs' interest in the mysterious, and he would like their help. He is staying at a hotel on the coast, near Ellesworth, Maine. It is about an hour from Bangor, which has an international airport. At the referee's discretion, Calderon may be able to provide the PCs with some aid (air fare, etc.).

Calderon can provide the following information: His friend, Dianne Wellston, and her husband, Kevin, are missing. Dianne is a software designer, and Kevin is a successful artist. Calderon reported them missing four days ago, when he went to visit their home outside of Sandport and found it empty. The local police sent an officer to investigate. There were no signs of a forced entry or struggle, and nothing was missing from the house (Dianne's computer equipment is worth a great deal, as are Kevin's works of art). However, clues indicate that the couple did not leave voluntarily (food was found in the microwave, lights were left on, the door was unlocked, etc.).

Calderon says he probably would have left the investigation to the police, except for two incidents. First, the day after he reported his friends missing, the local

By Michael C. LaBossiere

paper reported that a lobster boat had been found adrift, with no one on-board. The traps tended by the boat's owner are located off from the Wellstons' house, and the boat was found adrift nearby. The police and coast guard have no clues.

Second, Calderon says he saw something very strange, "vaguely man-shaped, but wrong-looking" in the water near the house two days after he reported the disappearance. He only saw it for a minute, then it vanished beneath the water.

LEGENDS

This part of the coast has a rather dark history. The town librarian and the curator of the local museum can provide all the information given below. Others, especially the older locals, will know bits and pieces of the legends.

Indian Legend: According to one Indian legend, a band of young hunters who went to swim in the ocean were attacked, and all but one were slain by evil spirits that rose from the sea. The survivor fled back to his tribe and told about what had happened. The brother of one of the slain hunters, who was a great warrior, led a group of warriors to the site of his brother's death. According to the legend, "The warriors did battle for three days and nights against the evil sea spirits, until they were vanquished and driven back through the hole in the ocean from which they had come." According to the legend, a group of watchers was formed to await the return of the evil sea spirits.

Abandoned Vessel: A sailing vessel was seen in 1698 adrift off the coast, near what is now Massachusetts. A group of English soldiers boarded her and found no one aboard. According to a journal kept by the officer in charge, there was no sign of a struggle on the ship. He suspected that the crewmembers had been stricken with a plague and had cast themselves into the ocean in their mad-

ness. The ship's log book gave no indication of what happened. The last entry noted that the ship was nearing a section of coast "where the Indians watch the sea." The captain also writes that one of the sailors saw a mermaid on the night watch.

Captain Blake: The next chapter in the dark reputation of the area opened with the construction of a house on the coast by Captain Blake in 1885. Blake had been a sea captain for years and had visited many strange places. According to the rumors of the day (taken from surviving journals and diaries), Blake came to Maine to avoid some trouble he had gotten into in Massachusetts. The more superstitious locals suspected that Blake was in league with the devil, while others thought he was involved in smuggling or piracy. Nearly everyone found Blake rather odd and disturbing. After 1885, journals begin to mention disappearances in neighboring towns, as well as strange sightings in the ocean. There are numerous references to a mysterious ship that would come in the night and leave before dawn. According to the journals, Blake died in 1891, but no account is given of how he died. If the PCs are persuasive, the librarian or curator will reveal that Blake was killed when a group from town attacked the mysterious ship when it appeared near Blake's home. The people set the ship on fire and smashed holes into its side until it sank into the depths. Blake was on-board. According to legend, Blake's dying words were, "Fools! You may kill me, but death will come to this land! Death will come from the sea!" A short while after the ship sank, a bright flash was seen from beneath the ocean. All the odd occurrences stopped after Blake's death.
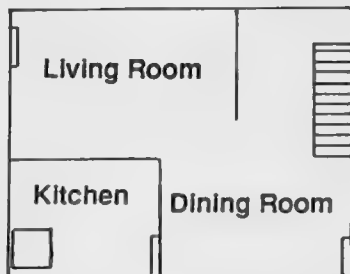
Murder/Suicide: Blake's brother, Donald, later took possession of the house. He was well regarded by the townspeople, despite their original fears. He died peacefully in 1924, and the
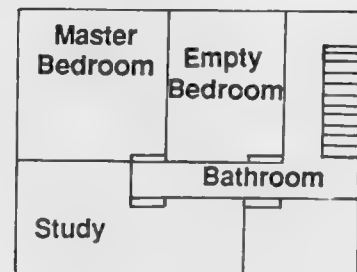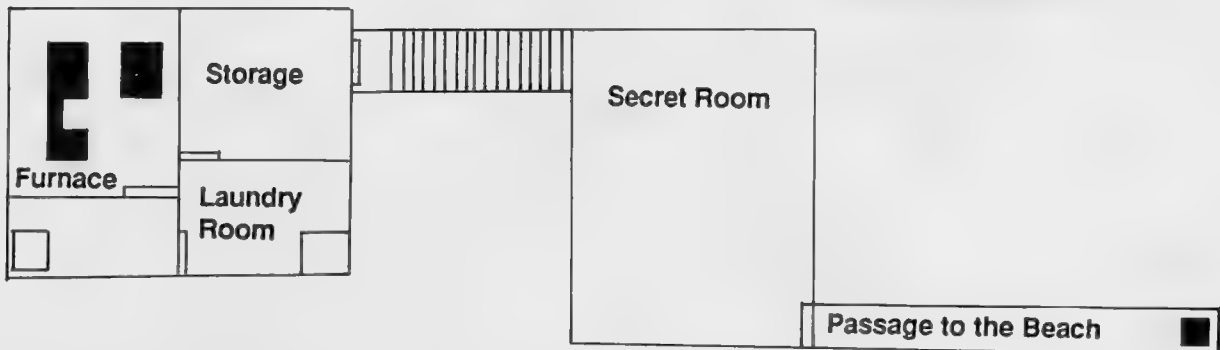
Coast

Sandport

Wellstons' House

Sunken Ship

Legend:
- Woods
- Ocean
- Road
- Building

First Floor

Living Room

Kitchen

Dining Room

Second Floor

Master Bedroom

Empty Bedroom

Bathroom

Study

Basement

Furnace

Storage

Laundry Room

Secret Room

Passage to the Beach
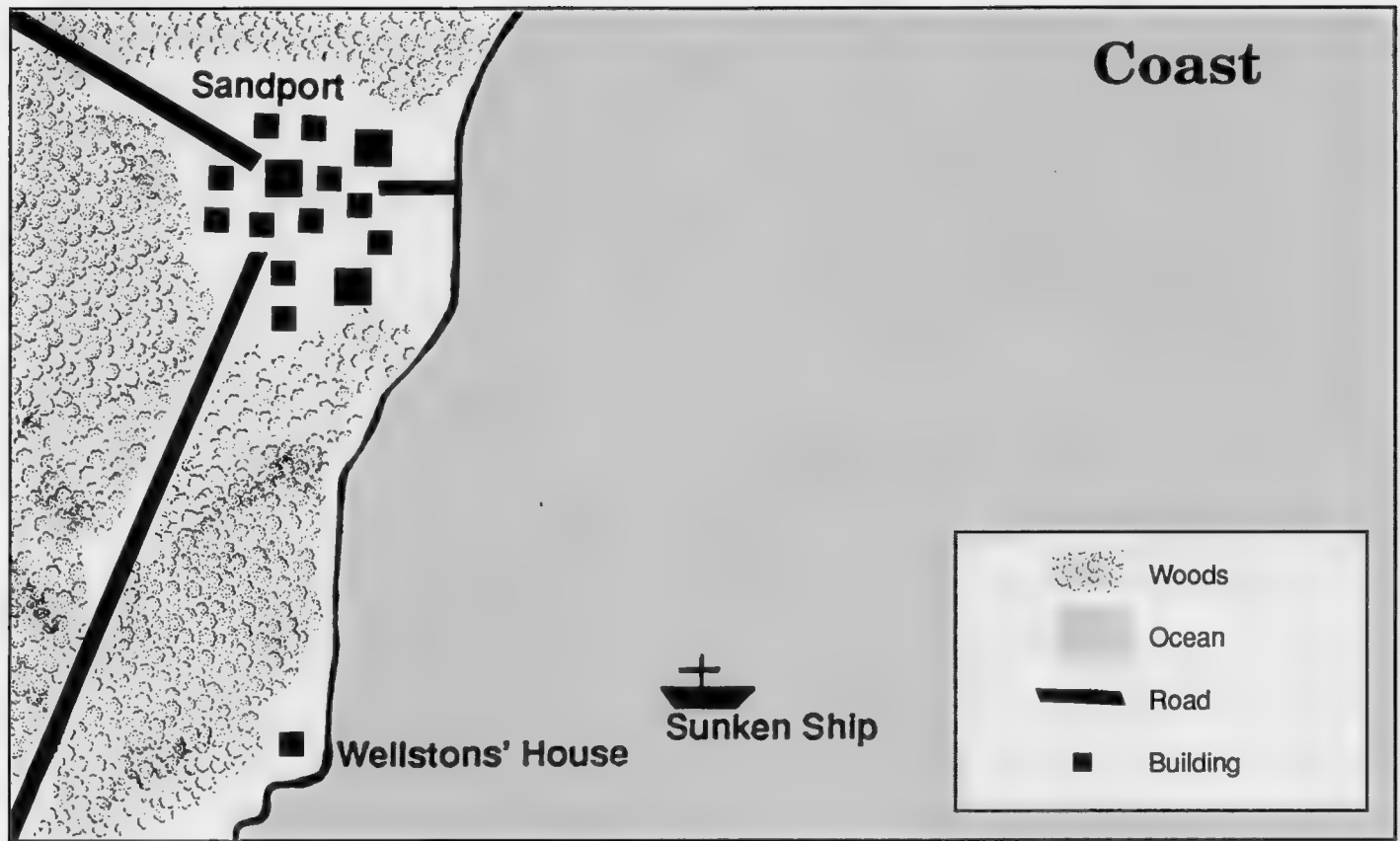
house remained empty until 1930. Then it was rented out for the first time, and it was periodically inhabited by tenants until 1982, when the man renting the house hung himself in the laundry room after shooting his wife. After that, the house remained empty, and people took to calling it the "haunted house."

FACTS BEHIND THE LEGENDS

A very old dimensional gateway to a proto-dimension is located on the sea floor off the coast.

Indian Legend: The young Indian hunters were killed by a group of beings from the proto-dimension, the ampharks, who went through the gate by accident. The Indian warriors killed many of the creatures, and the rest fled into ocean and were pursued by the Indians in their canoes. The Indians saw the gateway in the ocean and watched in shock as the beings passed through the portal.

Abandoned Vessel: The ampharks later learned the operation of the portal and came through to hunt terrestrial life. A group of them encountered the vessel mentioned above and killed the crew.

Captain Blake: Captain Blake eventually encountered these creatures and persuaded them not to kill him. In return for his life and for various other "benefits," he offered them his aid. The mysterious ship carried materials and equipment the beings wanted but could not manufacture in their own dimension. Unfortunately for the beings, when the townspeople sunk the mysterious ship, it came to rest on top of the gateway and damaged it, closing off access to this dimension. The bright flash of light mentioned in the story was given off by the damaged gate.

Murder/Suicide: The incident of the man shooting his wife and hanging himself was completely unrelated to the other accounts.

Present: The inhabitants of the proto-dimension determined how to construct their own portal. They opened one near the original gateway on day the Wellstons were reported missing. Since time flows differently in their dimension, and they live longer than humans, they thought Blake might still be alive. Instead of finding Blake, they encountered the Wellstons and killed them. Then they attacked the lobster boat that was found adrift. Calderon saw one of them in the

Ampharks

Strength: 13	Education: 2	Move: 3/9/16/32
Constitution: 11	Charisma: 3	Skill/Dam: 7/2D6
Agility: 6	Empathy: 9	Hits: 30/60
Intelligence: 7	Initiative: 4	#Appear: 2D6

Special: Amphibious. Darkling Empathy, Human Empathy, Project Emotion, Project Thought and Willpower Drain. Some have the ability to dimension walk.

The ampharks ("amphibious sharks") are a race from a primarily liquid proto-dimension. They evolved from a highly empathic carnivore that used its empathic abilities to confuse and deceive its prey.

The creatures average about 2.1 meters in height, and have pale gray skin and white underbellies. Their eyes are pure black, and they have gill slits in their throats. Their hands and feet have three taloned digits, and their mouths are very large, with multiple rows of shark-like teeth. Ampharks have vestigial fins on their backs, and some are born with small (useless) tails. They are amphibious.

Ampharks derive their sustenance from both physical and mental sources. They need to consume large amounts of meat, but they also need to "feed" upon the fear and suffering of other beings.

The empathic disturbances generated by fear and suffering also afford ampharks great pleasure—the greater the fear and suffering, the greater the pleasure.

Ampharks are somewhat contradictory in their nature. On one hand, they are masters of subtle attacks, and they enjoy elaborate plans geared to generate fear. For example, they excel at capturing people from boats or buildings without leaving any signs (their empathic abilities come in very handy here).

One the other hand, ampharks are also bloodthirsty killers, and often go into killing rages and lose all reason. During such berserk phases, they attack their opponent with their claws and teeth, ignoring their weapons and carefully laid plans.

In their own dimension, tribes of ampharks are constantly at war with one another over limited resources. The few dimensional portals that exist are often the center of conflicts.

Ampharks have recently mastered the art of constructing dimensional portals. Prior to constructing their own, they used those that a vanished race developed and left in their proto-dimension. Incursions of ampharks into Earth's dimension may well account for many sea and coast mysteries and legends.

The ampharks are skilled in biology and genetic engineering. They are known to extensively employ living organisms as tools, weapons and vehicles.

Animator Slime Skeleton/ Animator Slime Zombie

The ampharks have engineered an organism that has limited telekinetic powers. When placed on a skeleton or within a corpse, the organism can animate the bones or body to do its master's bidding.

Animator slime skeletons and zombies are identical to other "normal" animators.

However, they are vulnerable to agents that harm living organisms that the other animates are immune to (like poisons).

The slime animators are generally used to generate fear and are employed in battle as cannon fodder. The slime itself is very resistant to damage from bullets and knifes (being slime), but is easily killed by fire and poison. It must be kept moist.

water, but (fortunately for him) he was not noticed.

SANDPORT
The coastal map details the section of the Maine coast where the adventure takes place. The sunken ship is the mysterious vessel that the townspeople sank. It lays atop the original portal. Beside it is the new portal which was recently constructed on the ocean floor.

The town consists of mostly residential areas, but it has a general store, a sporting goods/fishing supply store and a small hotel. A small port section now serves only lobster boats.

Sandport has a population of about 1000. Many of the inhabitants commute to work in Bangor, and the rest are lobstermen. The locals are friendly, but are wary of strangers. Two of the older inhabitants (Bert and Jim) love to tell tall tales to any non-Mainers they encounter.

Sandport has three police officers, Experienced NPCs armed with M9s and Mossberg M500s. Most of the inhabitants do not own weapons and are not trained fighters. About 40% of the adult locals have hunting weapons or home defense weapons (mostly shotguns, hunting rifles and pistols). They should be treated as Novice NPCs in combat situations. Six locals have military experience and count as Experienced NPCs. Two of these have AR-15s; two have hunting rifles; one has a shotgun; and the other has a S&W Model 29/16.5.

HAUNTED HOUSE
The Wellstons inherited the house, which has been in their family for generations. Skeptical of the rumors of ghosts and goblins, they decided to make the house their home. The building is a well-built, New England coastal-style house. But something about it looks a bit spooky even during the day.

The house can be reached by a very rough, single-lane road that runs from the main road and through the woods. The Wellstons' Range Rover II is parked beside the house (the gas tank is 80% full). Police tape is strung across the doors, and signs indicate that the area is under police investigation. The police are not guarding the place, however, so it would be easy for the PCs to examine it.

Living Room: The living room con-

tains expensive, comfortable furniture. Several of Kevin's paintings, worth $3000 to $5000, hang on the walls. They are primarily of nature scenes, but one depicts a horror straight from the pages of H. P. Lovecraft.

Dining Room: The dining room contains a solid oak table, a china cabinet and so forth.

Kitchen: The kitchen is equipped with the latest in cooking devices. There is food in the microwave, and two opened sodas are on the counter.

Master Bedroom: This is an expensively decorated room, with nice dressers, etc. A black powder pistol (an original) is hung on the wall.

Study: This room contains several bookcases, with books on art, Eastern mysticism, computer software design and so forth. A custom-made computer (40 MB RAM, 800 MB hard drive), with a full range of peripherals (printer, modem, etc.) is equipped with a CompuAID (see **Darktek Sourcebook,** page 29). The hard drive contains numerous newly written applications which would be worth quite a bit to the right buyer.

Basement Storage: This room contains various boxes and trunks. The room smells of damp sea air, but the proximity to the ocean makes this not unexpected. A Difficult skill check using Observation will reveal a mark on the floor. If the mark is examined, it will be found to be ocean salt, as if salt water had dried on the spot. Once the mark is found, and Easy check using Observation will reveal a trail of salt to the wall, where the door to the secret room is located. If the trail is followed to the door, finding the unlocking mechanism will be an Easy task using Observation.

Secret Room: The stairs leading to the secret room are solid oak planks, but they have become slimy in the damp air. The smell of the sea is very strong on the staircase, but it is underlain by a foul odor. The secret room is dimly lit with odd seaweed-like plants growing on the ceiling. (An examination by a botanist will reveal that they are no known species of plant.) The greenish glow of the plants reveals a gruesome site—human bones and tattered clothes are strewn about the floor, and blood is everywhere.

A torn-up wallet reveals the identity of one of the "bodies" as Kevin. The other victim is obviously his wife. If a PC examines the remains, sharp teeth marks on the bone

will be evident. If a doctor or forensics expert makes an examination, he will say some kind of animal chewed on the bones. If the examiner knows anything about shark bites, he will say it looks a lot like a shark bite, but a very odd one.

Passage to the Beach: The passage slopes down and is filled with water at the far end. The interior is slimy, and small fish and crabs infest it. The far end has a trap door to the beach. It is disguised with a layer of barnacle-covered stone and seaweed.

EVENTS
Events on days 1-3 occur prior to PC involvement. The rest of the events will occur in the order presented, unless the PCs intervene. Because the PCs may respond to events in a wide variety of ways, details are left to the referee.

Day	Event
1	Wellstons reported missing.
2	Lobster boat found adrift.
3	Calderon sees something in the ocean.
4	Second lobster boat found adrift. No sign of the crew. (Attacked by three ampharks, one in a shell suit—see page 37.)
5	Sightseeing boat found adrift by coast guard after failing to return during the day. No sign of the crew or passengers (about 40 people). (Attacked by 10 ampharks, two in shell suits.)
6	Coast guard vessel found adrift by lobstermen, who tow it to Sandport. No sign of the crew. (Attacked by six Ampharks, one in a shell suit.)
7	Three shredded bodies found in a home in Sandport.*
8	Four shredded bodies found in a home in Sandport.*
9	Ten mysterious killings occur in homes in Sandport.*
10	The sunken vessel rises from the depths and docks at Sandport. Skeletons and monsters spill from the vessel, killing everyone in town.

*The inland raiding group initially consists of three ampharks. The number will increase if resistance is encountered.

DEAD FROM THE SEA
Initial attacks reveal to the ampharks that beings from other proto-dimensions

Organic Needler

Developed by the biological experts among the ampharks, this pistol-like weapon is an organism that produces poison spines. When activated, it expels these spines using air pressure. The weapon has a crustacean-like outer shell, with air sacs on the sides, and it fires the needles from its long, extended snout. The needler attaches itself to the operator's forearm and draws upon his body for its sustenance. It produces one replacement needle per hour, up to the "magazine" maximum. The operator must consume 0.1 kilograms of raw meat for each shot fired and 0.1 kilograms of meat for each needle regrown.

Ampharks can freely remove the weapon, but needlers can only be removed from a human by surgery (Darkling Empathy can also be used to order the weapon to let go). The weapon's needles do very little damage, but they contain a paralytic agent. A hit on a human-sized victim requires a Difficult: Constitution roll. A failed roll results in the victim being paralyzed for 20 minutes minus Constitution. A victim who succeeds in the roll loses one Initiative level for 10 phases minus Constitution.

User Cost: Feed (special)
Weight: 1 kg
Mag: 10
Price: N/A (—/—)

Weapon	ROF	Dam	Pen	Blk	Mag	Recoil SS	Brst	Rng
Organic needler	SA	*	Nil	1	10	1	2	1

*Damage is described.
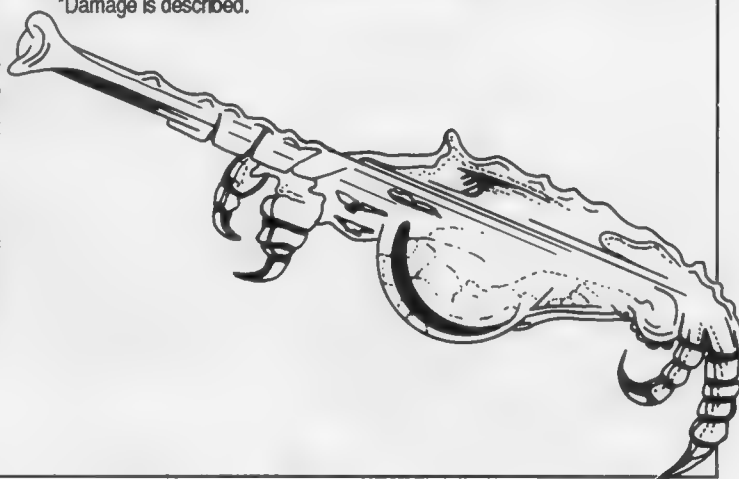
Shell Suit

The shell suit is a product of amphark biological engineering. The organism is roughly humanoid in shape, but has swimming appendages on the front and sides of its body. It looks roughly like a man-shaped, crab-fish thing.

The outer layer is a thick, crustacean-like shell that is yellowish-green in color. The face section consists of a transparent panel and the organism's gills. Under the shell are the organism's internal organs (heart, rudimentary brain and nervous system, etc.). It has an Armor Value of 1, and its muscle structure multiplies the operator's Strength by 1.5.

The shell suit provides oxygen to the operator by connecting itself to the operator's cardiovascular system. The suit is reliable down to about 300 meters.

All AGL-based tasks are performed at one level in difficulty greater while using a shell suit.

The organism feeds mostly on its own, with its mouth parts, but it draws heavily on its operator, causing him to feed on raw meat. Since the ampharks are ravenous carnivores, this is not a problem for them. The suit has the unpleasant effect of attaching itself to any human that might try to use it. Once the suit is attached, surgery (and some power tools) are required to remove it. Ampharks (and others with Darkling Empathy) can remove the suit at will.

User Cost: Feed 10
Wt: 75 kg
Price: N/A (—/—)

Sea Hawk Patrol Craft

The Sea Hawk is an ocean-going vessel employed by US government agencies and corporations for rescue operation, law enforcement and patrol duties. It is too small and under-armed to engage military vessels, but is very effective in rescue operations and in combat against the types of vessels most often used in smuggling.

Cruise Speed: 16/16
Fuel Cap: 750
Fuel Cons: 18

Config: Flush deck
Tonnage: 30
Hull Armor: 0
Waterline Armor: 0
Superstructure Armor: 0
Propulsion: Motor
Size: 3
Engine: Damaged ☐ Destroyed ☐
Sight/Vision: ☐
Crewmembers: Commander ☐ Navigator ☐ Helmsman ☐ / ☐☐☐☐☐☐☐☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐☐☐☐☐

Price: $770,000 (R/R)
Armament: Three M60s with port starboard, and aft firing arcs, respectively. One bow-mounted Mk-19 AGL
Length: 3
Draft: 1.5 m
Speed: 12
Turn: 4
Acceleration: 5
Pumps: 1
Night Vision: White light spotlight
Load: 2 tons
Minimum/Optimum Crew: 3/12
Fuel Type: D, A

Damage Record

Full Speed ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
☐☐☐☐☐☐☐☐

Dead In Water ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
☐☐☐☐☐☐☐☐

Sunk ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
☐☐☐☐☐☐☐☐

have taken over sections of the continent, that many sections of the area are no longer under the control of a central authority, and that many human settlements are nearly isolated. In short, the area ripe is for the picking.

Since the ampharks derive some sustenance and a great deal of pleasure from the fear and suffering of other beings, they plan an attack designed to maximize the fear and suffering of their victims.

Toward this end, they prepare skeletons with animation slime and put them aboard the sunken vessel. They then use their shell suits and inflated "balloons" to lift the ship to the surface and bring it to Sandport.

The Ampharks and their animated servants then go on a killing spree and will exterminate the population of Sandport if they are not stopped. Prior to the attack, they will cut the power and telephone lines and block the two roads with trees. The ampharks will fight until they kill everyone in town or until they are killed or driven off. Most of the townspeople will be lambs for the slaughter, but the police and ex-military people will put up a fight, as will some of those with guns. The ampharks will flee if they suffer more than 30% losses or lose all their shell-suited individuals.

All the ampharks will participate in the attack, and the portal will be left unguarded (they do not believe any human would be able to find it, let alone attack it). If the portal is damaged, the ampharks will be aware of it (via their empathic link to the portal), and they will stop the attack immediately and head to the gate as fast as they can. Naturally, they will attempt to kill anyone they find near the portal.

If the PCs learn about the gate by piecing together the references to the previous gate in the legends, they may decide to attack it. The portal is a black cube, 20 feet on each side, located under 18 meters of water. Wrapped all over it (except for the projecting face) is a pulsing organic mass. It glows faintly, and from it extend numerous small tentacles that are constantly dragging sea life into the body of the mass. The mass is a mindless organism that generates the electrical power required to run the portal. Anyone getting within a meter of it will be attacked by hundreds of tendrils and drawn into the mass. Run the attack like an erector attack (**DarkTek Sourcebook**, page 12). The portal and the organism can be destroyed by using explosives (sinking a vessel on top of it will also do the trick).

CONCLUSION

If the ampharks destroy the town, they will continue to attack coastal communities and ships, and will attempt to join up with beings from other proto-dimensions.

If the ampharks are driven off, they will bide their time. They will make contacts among the human population, and try to acquire weapons and other equipment. They will also contact beings from other proto-dimensions and will eventually try to destroy the town again.

If the portal is destroyed, the surviving ampharks will flee. They will continue their attacks on small vessels and isolated communities, but they will not be a serious threat until they can build another portal.

If the portal is destroyed and most of the ampharks are killed, the survivors will become a minor nuisance for a while until they are eventually killed off.

If the portal is destroyed and all the ampharks are killed, there will be no further trouble with the creatures, unless the ones left in the proto-dimension send another expedition. Ω

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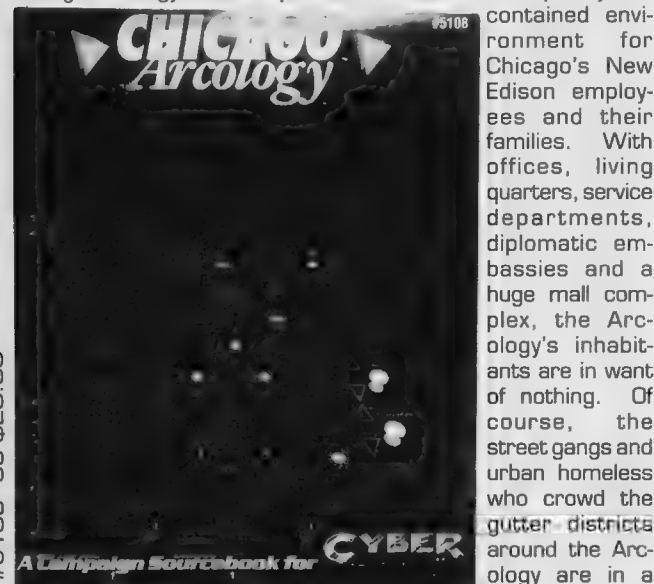**Cyberspace™ rules — a complete role playing game!**
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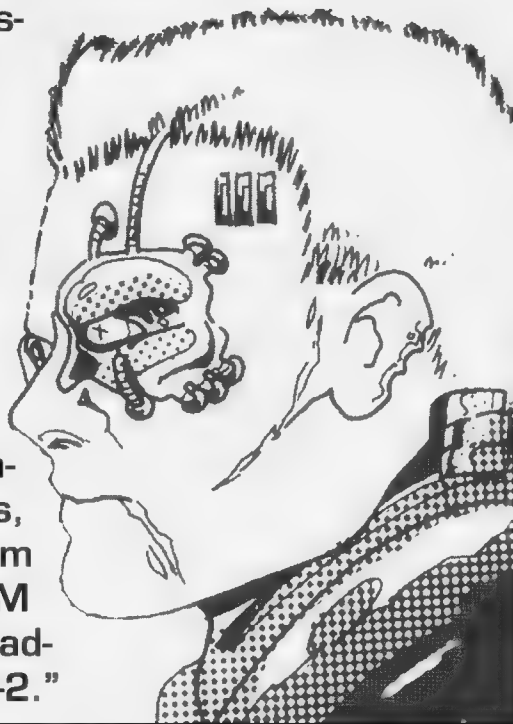
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But not only will players be able to venture across the face of the planet, they can also enter the labyrinths which honeycomb that world—Subterranean Yarth's Shallowshadow, Midgloom, and Deepdark—or journey to the hollow interior of the planet where ancient life forms still exist.

Yet there still remains the counter-world of *Phæree*, a world of wild magick, with its own outer, subterranean, and interior spheres. These are the realms of Færie (the Seelie Court, ranging from lordly dragons of the Orient to elves, unicorns, baku, and more in between) of Goblin (the Unseelie Court, with drakes, wyverns, serpents, and wyrms, evil once-men, onis, and undead), and of Hobgoblin (wild, monstrous creatures that dwell among all three spheres).

The Epic of Yarth sourcebook, then, is a must-have item. Whether you use it with the Mythus game or some other fantasy RPG, it will imbue the "body" of those rules with a truly fantastic "spirit." **GDW: 5001**
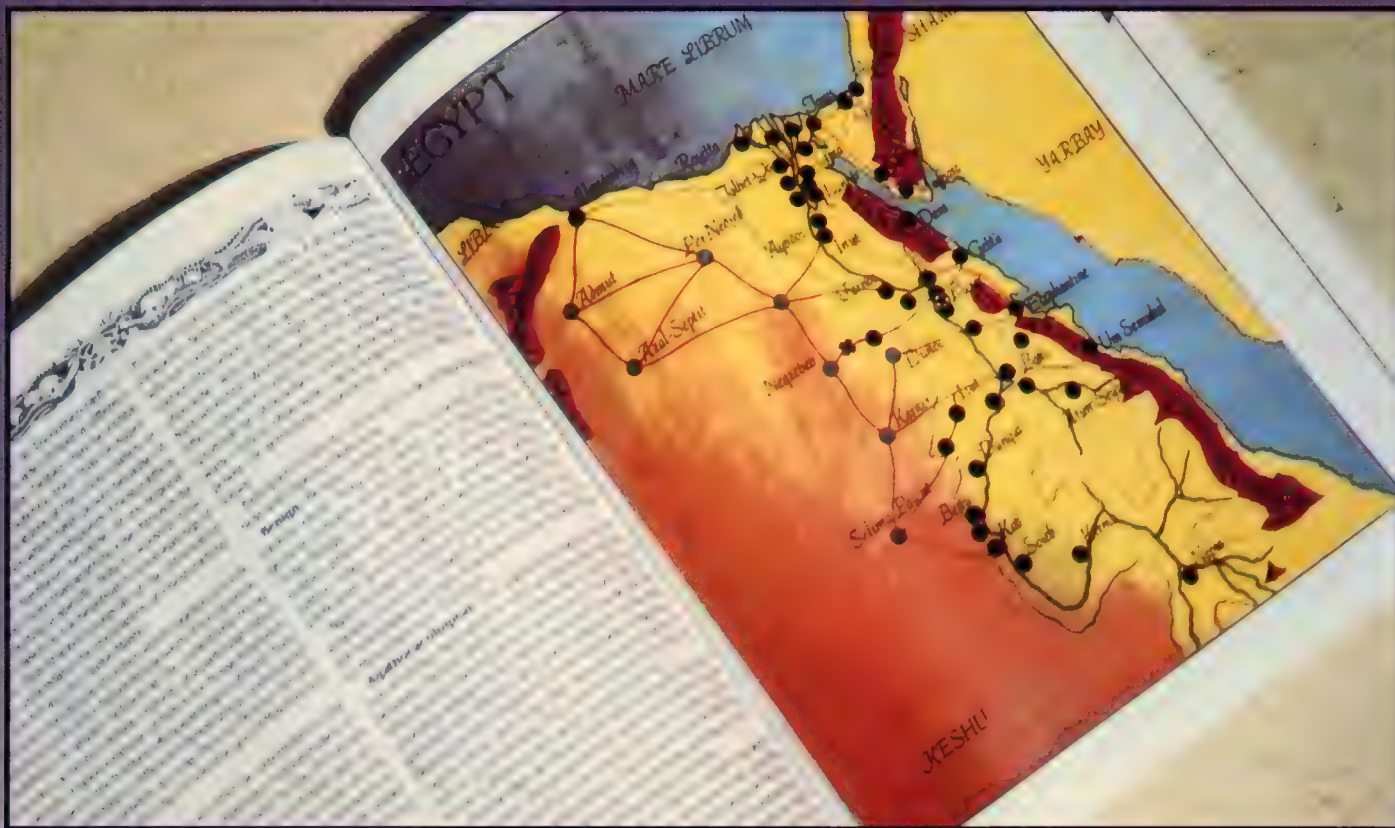
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GDW: 5002

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GDW: 5003

DANGEROUS DIMENSIONS 1992
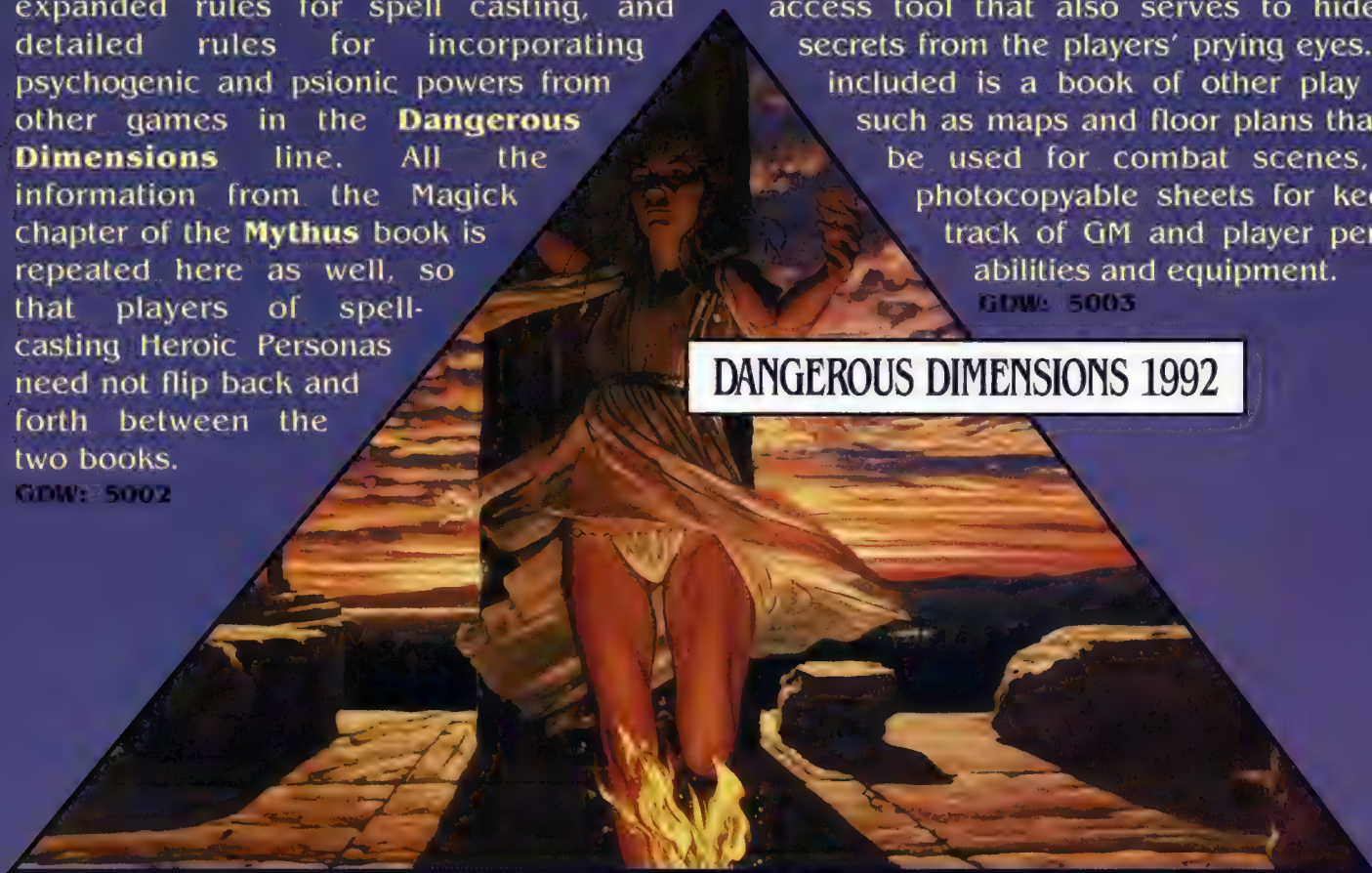
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The **Necropolis** campaign scenario, a Mythus adventure by Gary Gygax, sweeps your Heroic Personas across the dramatic landscapes of Yarth's most magickal kingdom, Ægypt. In search of a lost tomb. After a picturesque journey up the great river Nytle, the action begins. From a desert caravanserai and a bandit ambush, the personas find their way to the ancient burial grounds of the Gorge of Osiris. There they encounter evil in the guise of good—a dangerous madman and lurking demons—but the worst is yet to come. Overcoming that and more, the personas finally find the location of the lost tomb they have sought, but in its magickal maze lurk such foes as are encountered only in a nightmare! But it's too late to turn back—the heroes must prevail or perish!   GDW: 5004

Machines in the Shadows

In its projection of the technological future, *Shadowrun* incorporates virtual reality, cybertechnology and simsense, among other elements. One would think that this vision of the future would include robots as well. Alas, it does not. This article seeks to fill that hole by providing rules and guidelines for including robots in *Shadowrun*. This is only a framework—it is up to the referee to implement the rules in a manner that fits his particular campaign.

HISTORY

Robots first came into use in the late 20th century in the form of crude industrial robots used in production. It wasn't until the dawn of the 21st century that robots became cost-effective and gained full acceptance in the industrial world.

As breakthroughs were made in computer/cybertechnology, they were soon also applied to the field of robotics. The two industries fed off of one another's innovations, and as a result, many corporations that became involved in matrix technology and cyberware developed robotics divisions.

The VITAS plague in 2010 gave robots the boost they needed to gain corporate acceptance. The lower-class, poverty-stricken and super-exploited workers who had fueled production were decimated by the plague mostly as a result of their poverty. A new, cheaper labor force had to be found to replace them, and many corporations found the answer in robots.

Goblinization and the second wave of the VITAS plague once again fueled the corporate motion toward robotics as a means to solve the labor shortage.

Unfortunately, the push toward robotization that took place in 2010 and 2022 came to a disastrous end in 2029, when the computer crash immobilized most automatic production. Further paranoia

was seeded when the corps realized how vulnerable their robot-controlling computer systems were to renegade deckers and rival corps. It was only six years later, when IC became a solid feature of matrix systems, that robotics resumed an important role in corporations and society.

In the early half of the '40s, Aztechnology developed and used many robots in conflicts in Mexico and the Yucatan. Most were scouts, lightly armed and designed for intelligence rather than combat. However, rumors of robot tanks and air drones caused quite a panic in the international community. Fear that high-tech, mechanized armies could lead to wars without casualties for the most advanced nations led to a UN decision in 2045 that made the construction and production of robots for use in military combat a violation of international law. Of course, most countries continued R&D of military robots.

ROBOTS IN 2050

Security: Robots enjoyed widespread use in the security field until the dawn of magic. That brought invisibility, astral sensing and powerful yet undetectable weapons that compromised the effectiveness of security robots.

Two other reasons explain why robots did not replace humans in security work.

First was the threat of a malfunction or programming gap compromising security. It was difficult to prepare robots for every situation, especially how to respond to the illogical and irrational behavior quirks inherent in humans.

Second, the vulnerability of computer systems to the outside influence of deckers presented many problems. The threat of someone gaining outside control of security robots led corporations to guard their security nodes with expensive, high-quality IC. Some robots are built with

independent computer systems, but they are extremely expensive and may lack enough computer power to handle all situations adequately.

Regardless of the disadvantages, security robots are used by most major corporations to augment their internal security. They don't sleep, collect a paycheck or possess human flaws like delayed reaction or conscience. Incidentally, these same characteristics make robots prime candidates for dirty work like assassinations and warfare.

When a security robot encounters and identifies an intruder, it automatically triggers an alert through its connection with the matrix. A decker in the system can block the alert signal in the same manner it would block an internal alert.

Industry: Robots are used extensively in the production of goods. Most factories are automated with simple industrial robots designed to perform very specific functions. With more complicated work, robots do the menial or dangerous tasks to free up their human partners for more detailed work.

For example, robots are used extensively in agriculture. They plant, continuously monitor large crops, perform crop maintenance (fertilizing, etc.), and harvest. A flesh-and-blood crew is kept on mainly to solve problems, and to monitor and maintain the robots.

The biggest advantage of robots is that they can work in high-risk situations that are dangerous to humans. They can handle toxic chemicals and radioactive material. They are also used in mining, chemistry and exploration. Robots are an essential part of life in space. Such robots are either solely controlled by humans or hooked up to systems protected with black ice.

Domestic: Domestic use is limited to the households of the wealthy. Those who can afford it usually use security robots and possibly janitorial models. Robots have not yet been developed for other chores, mostly because the enormous cost of designing and producing such robots is not economically feasible. Besides, no corp has yet to design a robot that can successfully cook anything but the most basic meals.

ROBOTICS COMPANIES

That there is a great amount of money to be made in robotics is a fact realized by many companies, each specializing in one or more fields. These are detailed on the following pages.

Article by
Dan Snuffin

ATT (U.K.): Industrial robots.

Ares Macrotechnology: Security robots.

Aztechnology: Security and industrial robots. Also covertly constructs counter-security and military robots.

Federated Boeing: Industrial robots. Currently developing robot-controlled aircraft.

Fuchi: Industrial and corporate robots. Also constructs military robots.

Mitsuhama: Although not involved in the actual production of robots, Mitsuhama manufactures many of the delicate electronic parts that go into them.

Robotic Technologies Inc.

In addition to the corporations listed above, this new corp specializes in robotics.

Home Office Location: Seattle, UCAS.

President/CEO: Harlan Carson.

Chief Products/Services: Design, construction, and service of industrial and security robots.

Business Profile: One of the original members of the famous Echo Mirage team, Carson founded RTI in 2032 as a means of applying his extensive knowledge of computer systems and electronics. In less than 20 years, he has brought the corporation through economic turmoil to international success. Industrial espionage has been a real problem for RTI, notably the Aztechnology "information coup" of 2038, but stricter employee screening and better employee benefits have solved these problems adequately. RTI is one of the leading producers of agricultural robots and is responsible for many of the advances made in that market.

TYPES OF ROBOTS

The two main types of robots are system and solo.

System: System robots are linked to a CPU or SPU that regulates their operation and translates their data. Most system robots are immobile, simple machines designed for specific functions, but the category also includes maintenance, agricultural and light security robots.

The major problem with system robots is that they can be controlled by anyone who can break into the computer system. Thus, any robot-controlling node will always be guarded by some form of IC. Any form of security system robot will be slaved only to the CPU.

Solo: Solo robots are not directly hooked up to computer systems, instead relying on their own computer brain to operate. While some may interact with a larger computer system, they are able to make their own decisions. Solo robots are self-contained, complex and mobile. Household, military and most security robots fit into this category.

Renegade deckers may not be able to control solo robots through the matrix, but they can cut the robots off from the computer system so they cannot relay data or trigger alarms. Solo robots may have limited thinking power or gaps in their programming that makes them unable to react to situations properly. The parameters of these flaws is up to the referee.

Note that both types of robots can be adapted for rigger control.

GAME USE

It is suggested that characters be prohibited from acquiring robots for personal use. Limited availability, and overwhelming purchase and maintenance costs should be stressed, in any case.

Attributes: Robots have the vehicle attributes of Speed (in meters per combat action), Body, Armor and Signature. Reaction is used to determine initiative.

Skills: Robot skills are always very specific (i.e., Build Radio, Wash Windows, AK-97).

Sensors: Different types include video (thermographic, low-light, magnification), audio (high/low frequency, amplification), voice/pattern recognition, motion sensors, and any special sensors integral to the robot's duties.

Weapons: Note that this category includes not only mounted armaments of security robots but also the limbs and equipment mounted on normally benign robots that could be reprogrammed or directed to attack. Because of their complex targeting systems, robot attacks with firearms receive a −2 modifier. Built-in

recoil compensators negate the effects of recoil from automatic weapons. Large, on-board ammo hoppers alleviate most reloading problems.

SAMPLE STATISTICS

The robots that follow are examples, and this catalog is by no means complete. It is highly suggested that the referee develop his own robots to fit the needs of his campaign or scenario.

RTI Light Agribot X-34

Body: 4.

Reaction: 3.

Speed: 12.

Armor: 2.

Signature: 1.

Skills: Any agricultural skills appropriate to its specific work; usually a specialization of Botany.

Sensors: Video (thermographic). The robot is also able to analyze plant samples for disease and growth, soil nutrients, and humidity.

Weapons: Stomp/kick (5S4), pesticide spray (3S3).

Description: The X-34 is a five-foot-tall, spider-like robot that walks on six legs. An extendable probe is located under its body.

Notes: This is a system robot. The only time an agricultural robot would come into play is if someone took control of it through the guiding computer system or if the PCs accidentally got in its way.

Ares Watchdog Light Security Robot

Body: 6.

Reaction: 8.

Speed: 16.

Armor: 4.

Signature: 3.

Skills: Perception (7), Ares MP-LMG (6), Grenade Launcher (6).

Sensors: Video (thermographic, magnification), audio, voice/pattern recognition, motion sensors.

Weapons: Ares MP-LMG (5S3), grenade launcher (gas grenades).

Description: This robot looks like a hovercar with no windows. It is in fact a small hovercraft. A large spotlight is mounted in the "grill."

Notes: This is a system robot used to guard the perimeter of large corporate installations. Upon encountering an unidentified person, it will ask for identification in a crisp, electronic voice. If the identification is not valid, the robot will deny the person access and warn him of the consequences

of trespassing. If the person attempts to pass or attacks, the robot will immediately set off an alarm and attack.

Aztechnology Vanguard Light Security Robot

Body: 8.
Reaction: 8.
Speed: 8.
Armor: 5.
Signature: 4.
Skills: Perception (5), Ingram Valiant (6).
Sensors: Video (thermographic), audio, voice/pattern recognition.
Weapons: Ingram Valiant (5S3).
Description: The Vanguard is vaguely humanoid in appearance.
Notes: This robot is either system or solo, depending on the measure of security desired. Although it has arms and legs, the Vanguard cannot execute physical attacks.

RTI Hellion High Security Robot

Body: 12.
Reaction: 8.
Speed: 10.
Armor: 7.
Signature: 6.
Skills: Perception (8), Vindicator (8), Ingram (8).

Sensors: Video (thermographic, magnification), audio (high/low frequency), voice/pattern recognition, motion detectors.
Weapons: GE Vindicator minigun (5S3), Ingram smartgun (5S3).
Description: The Hellion is vaguely humanoid in shape.
Notes: The Hellion is a solo robot. It can punch for 8M2 damage, but may not kick.

Aztechnology Warbot

Body: 14.
Reaction: 7.
Speed: 15.
Armor: 8.
Signature: 6.
Skills: Perception (6), Target Identification (7), Vindicator Minigun (8), Panther Assault Cannon (8).
Sensors: Video (thermographic, magnification), voice/pattern recognition, motion detectors.
Weapons: Vindicator minigun, Panther assault cannon.
Description: The Warbot looks like a streamlined tank about the size of a car.
Notes: Warbots are solo robots, usually programmed for specific missions. Actual armament will vary according to purpose. Obviously, Warbots are highly illegal, and Aztechnology will go to extraordinary lengths to protect its secret. Ω

breached beyond its ability to self-seal. However, the ship does have power, and the sensor suite is still operational.

The rebels are in obvious need of help. Sensors reveal a strong power source only 12 kilometers distant in the direction of some close-by mountains. Gee, how lucky can you get? Repulsorlift vehicles are useless, as there is virtually no atmosphere. The PCs will have to trek across the moon's surface on foot in vacuum suits.

When the group gets within six kilometers of the power source, the moonscape becomes much rougher and broken, with rocky debris strewn across the surface. Allow each PC a Moderate: Perception task to realize that this area has suffered saturation bombardment, although they can't tell how long ago it occurred (this task is Easy for characters whose background includes lengthy military service).

Two kilometers farther, the characters stumble upon the rear fuselage and sublight drive of a crashed ship, fighter in size. A Difficult: Technology task identifies the wreck as a Z-95 *Headhunter*. A Moderate: Perception task also reveals the fact blaster fire had penetrated the hull and heavily damaged the sublight drive. The fighter didn't crash; it was shot down.

APPROACH

Upon reaching the site of the power source, the rebels see what is obviously a fighter-size launch bay protruding from a low cliff-face. Though the ship shows the scars of bombardment, the inset bay doors don't appear to have been breached. A bulbous projection near the bay, obviously for flight control, has been seriously breached, the jagged, torn metal visible from the plain below. An approach is much easier from the far side, as it is a gradual slope.

On the other side of the facility is a garage entrance which has been severely breached, with an intact personnel airlock next to it. Outside the airlock are humanoid footprints. The prints show that a number of humanoids entered (a Moderate: Perception task suggests the number was between six and 10), but there is no evidence that anyone exited through the lock. Leading away from the garage is a set of large tire tracks from a ground vehicle. The tracks obliterate the footprints about 20

meters away. These prints and tracks are pristine-clear and unmarred by micro-meteors, suggesting that they are quite recent.

If the rebels follow the tracks from the garage, they find an abandoned cargo hauler (similar to the Trast A-A5 speeder truck from the *Rebel Alliance Sourcebook* (page 110), but with six oversized wheels) tucked away in a large, shallow draw one kilometer distant. Allow each PC a Moderate: Technology task to identify the model as one manufactured for the Army of the Republic during the Clone Wars. The truck is sitting amidst the landing gear prints of what was probably a larger-sized light freighter. The truck can be started and driven by the rebels.

BASE

Without equipment and in vacuum suits, scaling the 40-meter cliff to the launch bay doors would be both difficult and risky, even in very low gravity. If they do reach the doors (such as through the use of speeders), the PCs are unable to open the bay's blast doors, and the shattered flight control room does not present a clear, safe opening to enter. This leaves only the air lock and garage door as sources of entrance.

Inside the base, life support is operational, as is artificial grav plating in the floor. However, throughout the base, two-thirds of the lighting has been shot out, creating dark corners and eerie shadows. Cameras cover all primary rooms and doors, but half are not functioning.

Armory: The walls here are lined with blaster racks, but all are empty. Several crates have been smashed, their contents gone. If the rebels look through the debris, an Easy: Search task reveals three loose grenades and eight blaster power packs (these are still charged, but will not fit the rebels' weapons).

Command Center: Gaining entrance to the command center requires a Very Difficult: Security task (or the use of explosives).

Piled on the floor here are 39 corpses. Clothing remnants suggest that some are military, but most are civilian. Corpses on the bottom are obviously decades old. An Easy: Medicine task reveals that those on top are about a year old.

Also piled here are about 100 weapons, ranging from blaster pistols and rifles to a couple of old repeating blasters. Most are old and have slightly less damage value than current equivalents (blaster pistols have 3D+2 instead of 4D).

A security station includes a bank of video screens showing various locations throughout the base, though half are blacked out. All bulkhead doors can be locked from here.

Anyone checking sensors will find power sources at 12, 18 and 20 kilometers distant. These are crashed vessels. Also, high radiation levels are detected only 30 kilometers distant. If the rebels investigate, they find a two-kilometer crater, with debris from a starship scattered for thousands of meters around the crater (the *Myrkos*).

The following information can be gleaned from computer logs: The base is the Tembora Research Station. Because enemy forces were active in the region, the dreadnaught cruiser *Myrkos* was placed in orbit over the base, taking precautions that only the ship's command and officers were aware of the location of the Tembora moon. Enemy forces discovered the base and attacked. *Myrkos*, severely damaged, plowed into Tembora and was destroyed. Apparently, enough damage was inflicted upon the enemy that they could not resume bombardment, or perhaps they believed that the base was destroyed. The last log entry is an alert from the lab section that "KLR-B1" was not responding to commands and was threatening the robotics team leader.

Tembora is a small moon, 1200 kilometers in diameter. Surface gravity is roughly 0.15 standard. There is virtually no atmosphere. During the tumultuous years of the Clone Wars, many planets changed hands or suffered severe bombardment. Army Weapons Research Dept. chose to build research facilities in remote areas to maintain secrecy and avoid destruction from random bombardment. Rogue planetoids were even better—especially if they were officially unchartered and weren't going to cross a star lane for several years. Tembora was such a planetoid. When *Myrkos* plowed into Tembora, the impact altered the moon's course only slightly. A concerted search would have

Tembora Research Station
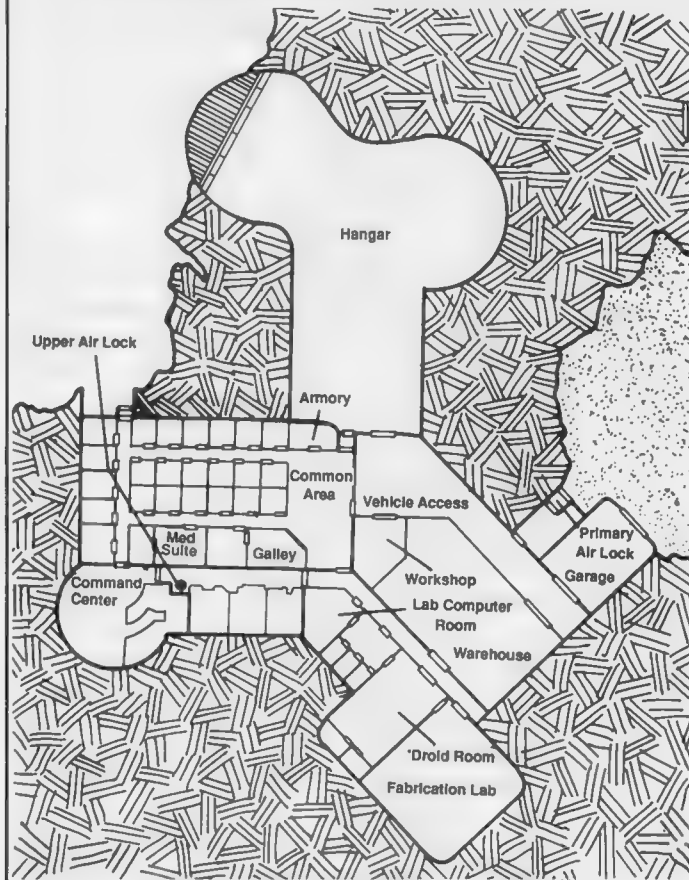
found the rouge moon, but, amidst the chaos and destruction of the wars, Tembora was lost. The station was probably assumed destroyed.

Common Area: Scattered throughout this area are 31 skeletal corpses. Blaster burns can be seen everywhere, the blackened spots interspersed with the browned splotches of dried blood.

Piled on the floor in the galley are three fresh human corpses, all partially dismembered. An Easy: Medicine task reveals that the corpses have been dead for roughly six to 10 hours.

A red panel light next to the door to fight control indicates that there is no pressure beyond the door.

'Droid Lab: Piled on the floor here are four fresh corpses—three human and one Twi'lek. One of the humans is a female, and she had been horribly dismembered. An Easy:.Medicine task reveals that the corpses have been dead for roughly six to 10 hours. Scattered around the lab are the old, skeletal remains of 12 other humans. Along one wall are four 'droid berthing stations

marked KLR-B1 through KLR-B4. All are empty.

Fabrication Lab: The skeletal remains of six humans are found here. The lab contains some very valuable fabricating machinery and metal stocks.

Garage: The vehicle door has literally been blown to pieces. However, the debris has been cleared away from the entrance (more footprints). Looking inside while using a light source reveals that part of the garage roof collapsed under the bombardment. There appear to be roughly six vehicles inside, but most are destroyed, partially or mostly buried under tons of rock and permacite. One vehicle (identical to the truck described in Approach, above) has suffered cosmetic damage only and is operational.

There is a clear spot close to the door large enough for a ground truck. A path has also been cleared from the clear spot to the garage door in the inside far wall. The far door is locked. An indicator light shows that the compartment on the other side is pressurized. A Moderate: Security task will bypass the automatic lock, but opening the door will result in rapid decompression of the pressurized compartment.

Hangar: While the hangar is intended for fighters and shuttles, a light freighter could berth in this bay. Located here are two Z-95 fighters and one hyperspace shuttle. The fighters show extensive laser cannon damage to the hulls, and the cockpits have been destroyed with explosives. Explosives have also been used on the shuttle to destroy the drive section and the cockpit. Allow each PC a Moderate: Technology task to identify the shuttle as a model used by Republic military forces during the time of the Clone Wars.

Scattered on the deck around the shuttle are the skeletal remains of six soldiers.

Lab Computer Room: The computer system is still operational. A perusal of its databanks reveals the plan of what was then the Army Weapons Research Dept. to develop the KLR series of combat 'droid, designed to have the highest survivability of any combat 'droid then in use. Extensive records show video recordings of battles between KLR-B1 and older 'droids, followed by analyses of KLR-B1's tactics and strategies. The last entry entered is as follows:

"It is possible that the whole KLR software programming may have to scrapped. The combat software programs we designed to make the KLRs the most cunning and efficient 'droids on the battlefield are flawed. KLR-B1 is proving unmanageable. He is somehow bypassing his programming limitations and circumventing system-manipulation failsafes. He has injured two technicians and killed a third. Units B2 through B4 have already been deactivated after only receiving initial system trials. Only B1 remains to be shut down, after which we will attempt to correct the software glitches. Were we to leave these 'droids active, it is very possible we'd end up with mechanical psychopaths on our hands."

Med Suite: When the rebels open this door, they are assaulted by the stench of burnt flesh. Strapped into a surgical couch is a naked human male—still alive, for the time being. The flesh has been burned off his foot to the ankle, leaving only charred, blackened bone. Blistering burns cover other portions of his body. Lying on a counter is portable plasma torch. The human is unconscious and not likely to live long without medical attention. Fortunately, medical stocks are full, including 32 med-packs. (Theses packs are decades-old, the medicines and diagnostics not up-to-date. If a character uses one of these packs, increase the Medicine task difficulty by two. An Easy: Medicine task reveals that these packs are less effective).

After being treated, the human becomes conscious (though his condition is still incapacitated—he could very well die tomorrow). He tells the rebels that he is Gillon, a crewmember on the *Maid*

of Sentiile. Gillon describes how the *Maid* barely avoided a crash, then sat down to investigate the base. "I was one of four men sent in first for a recon. We found the old 'droids in the warehouse, but the three in the lab were the valuable ones. The rest of the crew came in to get them while we four continued our recon. When we got to the common area, we were attacked by one of those big 'droids. It—it sh-shredded my buddies—just tore them apart!"

(Unknown to Gillon, the KLR 'droid—nicknamed "Killer"—returned to the warehouse just as the crew finished loading the other KLR 'droids. The 'droid managed to drop four, but the rest escaped in the truck. They aren't likely to return. Killer then dragged the four casualties to the lab, where he finished off the woman, who was only wounded.)

Primary Air Lock: The outer door is intact and unlocked. Surveillance cameras cover the door from multiple angles, but all were destroyed by flying debris. Passing through the air lock, the rebels find a ready room. The room is a mess. Dozens of vacuum suits litter the floor, all gashed and torn. All electronic equipment that was stowed here has been smashed.

Upper Air Lock: A red panel light next to ladder leading up to a ceiling bulkhead door indicates that there is no pressure on the other side of the door. The door has automatically locked because of the pressure difference. (A 40-meter passage leads to an airlock atop the cliff, which was destroyed in the bombardment.)

Vehicle Access: Lying next to the small personnel door are the skeletal remains of three humans. The portions of their dried skins that didn't rot still cling to their brown, stained bones. An Easy: Medicine task reveals the causes of death—bone charring on two indicates blaster fire, and nicks along the rib surfaces of the third indicate a blade weapon. A Moderate: Knowledge task reveals the uniform remnants to be of the style worn by the Army of the Republic during the Clone Wars.

Warehouse: Stored here are dried consumables—enough to last 70 people six months. Also stocked here is a good supply of of starship parts (for older vessels, though they can be jury-rigged and modified for use in up-to-date systems).

There are 23 undamaged but obliviously deactivated combat 'droids lined up in a neat row. Allow each PC a Moderate: Technology task to identify the 'droids as models that were old even at the time of the Clone Wars.

Several stacks of bins contain dismantled combat 'droids. Some bins contain undamaged, though obviously used, 'droid components, while others contain body chassis and components that have been destroyed by blaster fire.

Parked in front of the door leading to the garage is a wheeled forklift truck, operational.

ENCOUNTERING "KILLER"

The first encounter will be an ambush in the warehouse or in the common area, depending on which way the rebels go first. If the characters have not already encountered Gillon or any fresh corpses, then Killer has automatic surprise, allowing him two free haste actions without lowering his die codes. If the rebels are in the warehouse, Killer will strike from behind a stack of crates. In the common area, he will strike by smashing through a wall from a bunk room.

Killer is extremely fast, moving at the speed of a sprinting human. He will strike quickly and ruthlessly, using haste, using all three weapons in a single round when he can, and firing his repeating blaster multiple times each round.

In the first encounter, Killer will move rapidly through the rebels, engaging them for no more than three of four rounds, then exit the room through the door the rebels entered through. If the PCs attempt to leave the base, Killer will disengage doors from panel controls and wedge them shut, driving them deeper into the base. Killer will use the same hit-and-run tactics in all encounters, with about an hour between attacks.

GETTING OFF THIS ROCK

The players are likely to use the Force, explosives and ambush (after knocking out cameras) to eventually get the best of the 'droid. Or they can jury-rig something from Cracken's Rebel Field Guide. With Killer destroyed, the rebels can finish their search of the base. There are plenty of parts stocks to repair either their old vessel or a new one they have laid claim to. And the consumables, weapons, fabrication equipment and 23 'droids are valuable salvage. The base itself could be of great value, as it is obviously unknown to the Empire and won't cross another star lane for two years.

KLR-B1 "KILLER"

Developed during the later stages of the Clone Wars, the KLR series combat 'droid was designed to employ the most sophisticated 'droid tactical programming and have the highest survivability of any combat 'droid of its time. Unfortunately, the KLR-B prototypes were flawed. Following a raid on the Tembora Research Station, KLR-B1 went rogue and murdered all base personnel.

Since the time of the Clone Wars, small starships have periodically landed or crashed on Tembora as the rogue moon crossed interstellar space lanes. Surviving crewmembers who crashed close enough to make it to the base served as Killer's only source of entertainment.

At first, he simply murdered them. But he quickly learned that toying with them and drawing out their deaths was much more satisfying.

Killer was created using the 'droid creation rules from the *Star Wars Rules Companion.* Because of his role as a primary NPC, he was created using the building dice allowed a PC character 'droid. His improved skills reflect the value of 93 skill points earned in his technical tryouts and in previous encounter over a period of decades aboard the station.

DEX 3D Blaster 7D Melee 5D
KNO 1D
MEC 1D
PER 3D Hide/Sneak 4D
STR 5D (+5D additional armor)
TEC 1D Security 3D

Equipment: Locomotion (two legs), photoreceptors, radar, macrobinoculars (internal), comlink, audio membranes, heavy grasping arm, vibroblade, blaster carbine and repeating blaster. (The grasping arm, vibroblade, and blaster carbine are all in one arm. The repeating blaster is the other arm). Ω

New SPACE GODS DISCOVERIES

By Martin Wixted

S pace Gods, West End Games' *Torg* sourcebook, offers a tantalizing glimpse of alien worlds and technology. Unfortunately, only so much can fit into a 128-page book. Following is a set of new Biotech equipment and Akashan Creatures with which to expand the realm of *Space Gods*.

Biotech Equipment

Frask: This organism resembles a tiny, clear contact lens. A Frask dies when it detects a Thought Scan power directed at its host. The death triggers a chemical change, causing it to become slightly cloudy and thus alerting the host. Instead of a Good result the psionic attacker must obtain a Superior success to prevent triggering a Frask.

The nature of Lorbaat eyes prevent them from benefiting from Frasks.

Hozil: Hozils resemble microscopic earthworms. A Hozil enters through the nose or throat, and attaches itself to the lungs, where its waste is absorbed by the host. After one day, the absorption enhances a character's confidence, bestowing +1 to all Persuasion and Charm attempts. Successful use of Charisma Control does not affect this organism, but an Ego Strike stuns the Hozil, rendering it inert for 24 hours.

Kinhin: These organisms are extremely frail membranes which increase a character's hearing. When dropped into the ear canal, they act as a pre-amplifier, offering a +3 bonus to all hearing-based Find attempts.

Needling: The gray, millimeter-long Needling burrows under the skin at the back of the neck. Its natural secretions act as a limited emotion damper. The difficulty of Intimidation, Taunt or Interrogation attempts against the character are increased by +3. The Needling has no other effect, and it survives for 24 hours once placed in a host (even if the creature is removed later).

Nybok: This organism dampens psionic use. Resembling a leech, the half-millimeter-long creature attaches itself to the base of the skull and promptly falls asleep. For the duration of the organism's presence, any attempted Psionic Manipulation skill used by the character, or directed at the character by another, is subject to a +3 difficulty.

Nyboks only function in characters who possess psionic powers, as they feed off the character's Psionic Manipulation ability.

Penital: This organism works to dampen sound. Penitals virtually assure that a character will not suffer auditory distractions, permitting intense concentration in a noisy environment. Penitals lower a character's Perception (and related skills) by –3 versus noise, but if the noise is loud enough, the character might feel a slight vibration. The Penital crawls into the ear canal and inflates, wedging itself in the canal just ahead of the eardrum. Penitals are

mated for life. If one Penital dies, the other follows almost instantly.

Tronack: This organism operates through the base of the spine, providing the character with an automatic active defense for Intimidation, Test of Wills or Interrogation attacks against the character. The character can perform a normal action in the same round he rolls for an active defense against any of these three attacks, in effect providing a specialized flurry. This does not affect additional flurries, such as those proscribed by the encounter line of a Drama Card. The Tronack can survive three such uses before it dies.

Akashan Creatures

The transformations which accompanied the Akashan's return resurrected many extinct South American species. Animals not seen for hundreds of years (and some never seen by humans) now roam freely across the continent and swim in neighboring oceans.

For example, Orestias Cuvieri were the native fish of Lake Titicaca which were wiped out by the deliberate introduction of Great Lakes trout. With the coming of the Akashans, all existing trout have transformed into Orestias. Unlike the original flatheaded fish which grew to 30 centimeters, these new fish are much larger, reaching lengths of up to a meter. They are thus proving to be an abundant food source.

Not all animals now seen among the Andes are native to Core Earth, however.

GYLPTODONT

Remains of Gylptodonts have previously been found by archeologists, and now the huge Mohani-bred armadillos are once again roaming the tropical forests of Brazil. With a body shell reaching a height of over one meter and a length of two meters, these lumbering behemoths are taxing the natural food supply in order to keep their stomachs full.

Gylptodonts are as nasty as the famed wild boar, and they alternate physical attacks with a Spirit vs. Spirit attack. The creature uses its hate-filled disposition as a weapon against an opponent's Faith or Spirit.

The results are read as stun damage. This is a deliberate act, but it is not directed by intelligence, as the spiritual assault is always focused on the current attacker.

Gylptodonts continue to fight after they are effectively dead, ignoring any damage until they suffer seven wounds or until the combat ends.

If a Gylptodont survives an attack, only after the scene ends does wound damage take normal effect. Thus, at the end of an encounter in which it suffered four wounds, the Gylptodont finally dies.

DEXTERITY 10
Unarmed Combat 20
Swimming 12
STRENGTH 15
TOUGHNESS 19
PERCEPTION 8
Tracking 10
Trick (12)
MIND 3
Test (12)
Survival 6
Willpower 8
CHARISMA 1
SPIRIT 14
Intimidation (14)
Spiritual Attack 21
Possibility Potential: None
Natural Tools: Claws, damage value STR +2/17

TOXODON

The re-awakened Toxodon, or giant rhinoceros, has swiftly established itself along the stretches of land near the base of the Andes. Toxodons are generally aggressive herbivores who hunt by means of hearing and smell.

These large creatures have poor eyesight, which explains their tendency to charge with an attempt to impale and trample any living things smaller than themselves.

DEXTERITY 12
Dodge 16
Unarmed Combat 16
STRENGTH 18
TOUGHNESS 16
PERCEPTION 12
Tracking 15
MIND 4
Survival 12
CHARISMA 2
SPIRIT 4
Intimidation 18
Possibility Potential: None
Natural Tools: Horn, damage value STR+3/21; trample, damage value STR+4/22

DONKEY

The donkey eats just about anything and requires little water—a perfect "pack horse" for the mysterious continent. Smarter than a horse, a donkey does not follow commands it considers stupid or foolhardy, which is the basis for it being labeled as stubborn. Donkeys are suitable as riding animals (they average about 20 kilometers a day, assuming 10 hours of riding) and attack only in self-defense. Donkeys can carry a measure of weight equal to their Strength.

DEXTERITY 10
Dodge 12
Running 13
STRENGTH 12
Climbing 12
TOUGHNESS 10
PERCEPTION 8
MIND 5
CHARISMA 2
SPIRIT 4
Possibility Potential: None
Natural Tools: Bite, damage value STR+3/15; hoof, damage value STR+4/16

Genetic Clues

A Lorbaat warrior, out looking for trouble, discovered a chinchilla and used her Psychic Assault power against it. The power seemed to have no effect. Further experimentation convinced her that these small South American rodents (although tasty) were immune to psionic attack.

Some scientists have suggested that the volcanic dust with which the animal daily bathes provides protection, because it is also immune to all known Core Earth diseases. This innocuous creature may hold the clue to destroying the Comaghaz plague.

The Cyberpapacy and Nippon Tech are currently working to determine the validity of these claims, as well as the source of this immunity. Ω

Low Desert Kill

By Michael C. LaBossiere

Kenseng 4 is an excellent example of what mankind can do to a world. Centuries of war and misuse have turned vast areas into desolate wastelands. But even though Kenseng 4 is no longer a nice place, it still attracts visitors. Of course, Kenseng 4's 'Mech factories generally attract the kind of visitors we can do without.

Numerous Clan raiding forces were sent to attack Inner Sphere 'Mech factories during the course of the Clan-Inner Sphere Conflict. One targeted 'Mech factory was one of Kerek Arms' production facilities, located in an area known as the Low Desert. This region was desolated by centuries of warfare and environmental abuse, creating a treacherous field of battle on which the brand new Kerek Arms 'Mechs were to get their first taste of battle.

GAME SETUP

Turn over the *CityTech* and *BattleTech* maps so the white hex sides are showing. Lay each map side by side (like a normal setup, only upside down). The maps are designated as Map 1, 2, 3 and 4 (respectively), numbered from left to right.

Rubble counters should be distributed on each map, with the number of rubble counters increasing on each map (Map 1 has the least, Map 4 the most). If desired, elevation markers can be used to create sand dunes (construction paper works nicely).

On Map 4, three hardened and two heavy buildings should be set up near the center of the map, within two hexes of one another. The hardened buildings are the production facilities, and the heavy buildings contain the offices and living quarters.

ATTACKER

A Clan raiding force is the attacker.
Command Star:
1 Man O' War: Piloting 3, Gunnery 2
1 Mad Cat: Piloting 3, Gunnery 3
1 Ryoken: Piloting 4, Gunnery 3
2 Black Hawks: Piloting 4, Gunnery 4
Fire Star:
1 Loki: Piloting 4, Gunnery 3
4 Vultures: Piloting 4, Gunnery 3
Recon Star:
5 Koshi: Piloting 4, Gunnery 4
Setup: The attacker sets up on Map 1. All units must be within 10 hexes of the left side of the map.

DEFENDER

The defending forces are composed of Kurita Regular Army units and workers from the 'Mech factories.
Command Lance:
1 Marauder: Piloting 4, Gunnery 3
1 Thunderbolt: Piloting 4, Gunnery 4
2 Grand Dragons: Piloting 5, Gunnery 4
Fire Lance:
1 Archer: Piloting 5, Gunnery 3
1 Catapult: Piloting 5, Gunnery 3
2 Trebuchets: Piloting 5, Gunnery 4
Tri-YJ Unit:
3 Yellow Jackets: Piloting 5, Gunnery 4
Tri-M Unit:
3 Mosquitos: Piloting 5, Gunnery 4

Vehicles:
3 Kelson Support Vehicles: Piloting 5, Gunnery 4
2 Thors: Piloting 5, Gunnery 3
3 Warrior H-7 Attack Helicopters: Piloting 5, Gunnery 4
Infantry: Three platoons of rifle-armed foot infantry.
Installations: Each building has a turret with 40 points of armor. Each turret is armed with an AC/5 with 20 shots.
Setup: The infantry units are set up on Map 4. The rest of the defending units may be set up anywhere on Map 3 or Map 4.

SPECIAL RULES

The Low Desert is a region of very odd terrain. The sand has become saturated with industrial chemicals, and the various reactions have created a material that is slippery and unstable. The shifting of the sands in the wind also generates a charge in the particles (due to the presence of chemicals, alloys and other materials) that is discharged when something metal (like a 'Mech) contacts the sand. In game terms, all ground vehicles receive a +1 modifier on their Piloting rolls and lose 1 movement point when in clear terrain due to the sand.

VICTORY CONDITIONS

The attacker wins by destroying the three hardened buildings (the 'Mech factory facilities), and the defender wins by preventing the attacker from fulfilling the victory conditions.

YJ-5K "YELLOW JACKET"

Produced by Kerek Arms, the Yellow Jacket incorporates highly advanced technology into its design. Its XL engine provides it with a high ground speed at a low cost in weight ,and its endo-steel internal structure also saves weight. Tactical doctrine calls for Yellow Jackets to operate in groups of three (a "Tri-J"), and they are often supported by Mosquitos (which also operate in triads).

Capabilities: The Yellow Jacket's high speed and laser armament enable it to perform its role as a recon/deep raider 'Mech admirably. The high speed enables it to penetrate deeply into enemy territory, and its laser armament gives it the combat endurance raiders require.

Variants: This new 'Mech has no mass-produced variants. There were several prototype models with varying armaments (one was armed with two medium pulse lasers and a large laser), and a prototype might turn up on the battlefield.

Mass: 25 tons
Chassis: Endo Steel
Power Plant: 200 XL
Jump Jets: None
Armor: Deftech 7
Armament:
8 Defiance B3M medium lasers
Manufacturer: Kerek Arms
Communication: TrueTalk 4
Targeting and Tracking: SureKill 5
Type: YJ-5K "Yellow Jacket"

		Tons
Tonnage: 25		25
Internal Structure:		1.25
Engine: 200 XL		4.25
	Walking MPs: 8	
	Running MPs: 12	
Heat Sinks:		0
	10 [20] Double Heat Sinks	
Armor Factor:	88	5.5

	Internal Structure		Armor
Head	3		8
Center Torso	8		12/4
R/L Torso	6		8/4
R/L Arm	4		8
R/L Leg	6		12
Weapons and Ammo:	Loc	Critical	Tons
Med. laser	CT	1	1
Med laser	CT	1	1
Med laser	RT	1	1
Med laser	LT	1	1
Med laser	RA	1	1
Med laser	RA	1	1
Med laser	LA	1	1
Med laser	LA	1	1
Heat sink (double)	RT	3	1

MS-5Q "MOSQUITO"

Produced by Kerek Arms, the Mosquito incorporates highly advanced technology into its design. Its XL engine provides it with a high ground speed at a low cost in weight, and its endo-steel internal structure also saves weight. Tactical doctrine calls for Mosquitoes to operate in groups of three (a "Tri-M"). Mosquitos are often used to support Yellow Jackets.

Capabilities: The Mosquito was designed to provide long-range support for its smaller cousin, the Yellow Jacket. The unit's four LRM-5s enable it to perform this job admirably, and its high speed and laser armament enable it to engage effectively in close combat.

Variants: This new 'Mech has no mass-produced variants.

Mass: 35 tons
Chassis: Endo Steel
Power Plant: 245 XL
Jump Jets: None
Armor: Deftech 7
Armament:
4 Defiance B3M medium lasers
4 Long Arrow LRM-5s
Manufacturer: Kerek Arms
Communication: TrueTalk 4
Targeting and Tracking: SureKill 6
Type: MS-Q5 "Mosquito"

			Tons
Tonnage: 35			35
Internal Structure:			1.75
Engine: 245 XL			6
	Walking MPs: 7		
	Running MPs: 11		
Heat Sinks:			0
	10		
Armor Factor:	112		7
	Internal Structure		Armor
Head	3		8
Center Torso	11		16/6
R/L Torso	8		12/4
R/L Arm	6		11
R/L Leg	8		14
Weapons and Ammo:	Loc	Critical	Tons
Med laser	RA	1	1
Med laser	RA	1	1
Med laser	LA	1	1
Med laser	LA	1	1
LRM 5	RT	1	2
LRM 5	RT	1	2
LRM 5	LT	1	2
LRM 5	LT	1	2
LRM ammo (48)	CT	2	2
LRM ammo (12)	RT	1	0.5

KELSON SUPPORT VEHICLE

Designed as a support vehicle by Kerek Arms, the Kelson is designed to play two types of support roles for Mosquito and Yellow Jacket 'Mechs.

In its first role, the Kelson serves as a fire support vehicle. Its large laser and two LRM 5s provides it with the required long-range firepower.

In its second role, the Kelson serves as a supply carrier. It can carry up to four tons in its internal cargo bay and far more in special containers that can be connected to the hull. Kelsons typically carry two tons of LRM 5 ammo and two tons of sensitive repair equipment in the internal bay, and carry less delicate items on their outer hulls.

A typical unit of Yellow Jackets, Mosquitos and Kelsons will be composed of three Yellow Jackets, three Mosquitos and three Kelsons.

Capabilities: The Kelson's high-efficiency fusion energy gives it the power it needs to keep up with its 'Mech partners and the ability to carry substantial amounts of cargo without becoming too slow. Its missile and laser armament enables it to engage light 'Mechs and vehicles with a reasonable chance of victory.

Type: Kelson Support Vehicle
Mass: 35 tons
Chassis: Standard
Movement Type: Hover
Power Plant: Fusion
Manufacturer: Kerek Arms
Communication: TrueTalk 4
Gunnery System: SureKill 4

Type:	Kelson	Tons
Movement Type:	Hover	
Tonnage: 35		35
Cruise Speed:	8	
Flank Speed:	12	
Engine:	Fusion	5.25
Control:		1.5
Heat Sinks:	10	
Internal Structure:		3.5
Turret:		0.7
Armor:	96	6
	Location	Points
	Front:	26
	L/R side:	20
	Back:	10
	Turret:	20
Weapons and Ammo:	Facing	Tons
LRM 5	Front	2
LRM 5	Front	2
Large laser	Turret	5
Small laser	Turret	0.5
Small laser	Turret	0.5
LRM ammo (36)	Body	1.5
Cargo	Body	4 Ω

Star Wars Death Star Technical Companion *review by Craig Sheeley.* Star Fist *review by David L. Pulver.*

Star Wars Death Star Technical Companion

West End Games.
$15.00.
Designer: Bill Slavicsek.
96-page sourcebook.

With this sourcebook, West End Games has decided to tackle the largest "dungeon" in gaming history. I was impressed (and skeptical) when Iron Crown tackled the Mines of Moria. The Death Star puts that project to shame.

The author does a good job of covering the enormous station, splitting up the sourcebook into sections covering the history of the station, construction, technical stats and interior. He rather cleverly accomplished the difficult task of detailing its surface and floor plans by establishing that "the Empire is a master of modular technology design." "While we may only detail a small section of the massive Death Star within these pages," he asserts, "areas with similar functions will be very similar in design. In other words, one hangar bay looks like any other hangar bay aboard the battle station."

Using this system, the book details "city sprawls," modular sections of the Death Star's surface that handle shield generation, fire power, vehicle bays, etc. Other specialty sections are covered security sections, command centers, engineering holds, TIE fighter bays, "superlaser" (planet-smasher beam) fire control centers, even the Emperor's throne room! As usual, very technical maps are provided for each section—after all, the information would hardly be useful without maps.

Further chapters detail the not-so-small army of troops and armada of ships carried aboard the battle station, complete with troop vehicle and ship stats, and NPC stats for several featured NPCs. There is even a chapter on the Alliance's evaluation of the Death Star's past performance and what allowed the Alliance to destroy the first one (the background in *The Star Wars Role Playing Game* is supposed to be set between *Star Wars* and *Return of the Jedi*, roughly right after *The Empire Strikes Back*).

JUSTIFICATION

The author even covers the most important question and most severe criticism of the whole concept of a book detailing the Death Star: Hey, didn't Luke Skywalker give it a terminal case of proton indigestion? After all, the whole mashuga went BOOM at the end of *Star Wars*. And the second one was fragged before it was completed in *Return of the Jedi*. So why have a book on

something that no longer exists?

Ah. Maybe the Empire has scaled down the Death Star to something that doesn't take quite so long to build. After all, the Torpedo Spheres are roughly based on a small-scale Death Star design. Throw a miniature Death Star at the player characters and see how they fare!

Or just keep the book around as a curiosity. It's still useful—remember, the Empire is the past master of modular technology. The Death Star's components were constructed from designs already used by the Empire—I was struck with·the similarity between the layouts in the Death Star and those in the Imperial planetary fortress detailed in the *Star Wars Sourcebook*. If you need a detention level on planet Boola 4, just take out this book and flip to page 68. There's your detention block, laid out in a full-page map. Need a medical bay? A turbolift nexus? A hangar bay? Turbolaser tower? All those and more are in this book. In that regard, the book is a very handy reference source for maps and installations of all kinds. Of course, it includes the usual Lucasfilm illustrations and art, although there is some very nice new artwork as well.

FLAWS

Of course, it's not perfect. There are some minor flaws, the most important being a complete lack of any quick information system—there is neither table of contents nor index! I find this unprofessional as well as irritating—you have to thumb through every page to find what you're looking for. Personally, I wouldn't have minded one less picture if I could have a table of contents.

The other minor flaws were mostly subjective. I thought the dimensions for the Death Star were too small, preferring the round number of 160 km (100 miles) to the stated girth of 120 km. But, I haven't gotten out *Return of the Jedi*, a set of calipers and a calculator to calculate the exact figure (by comparing the Death Star's curvature to the length of the Executor when the command ship crashes), so 120 km sounds as good as 160 km.

I hate the designation "superlaser" being applied to the main weapon. What it does is far beyond the purview of laser weapons and is thoroughly in the range of antimatter weapons, but that doesn't matter.

I still loathe the inefficient, senseless, multiple-branch military system set up by the ex-SPI author of the *Imperial Sourcebook* and used as a base for the forces occupying the Death Star, but at least this book glosses over the subject, spending a minimum of time on it.

The sourcebook has the identities of Admiral Motti and General Tagge mixed. Tagge was the one who was riding Lord Vader and got such a pinch. Admiral Motti was never even identified—the gent on the other side of the rebel who was protesting about rebel capabili-

ties was addressed as "commander" and never named.

EVALUATION

These were the things that struck me wrong about this book—trivialities. Aside from the lack of any index or table of contents, the book's very good. I recommend it to *Star Wars* fans and referees, as well as people interested in a fairly good treatise on the "ultimate power in the universe."

Star Fist

Steve Jackson Games.
Price: $19.95
Designer: Steve Jackson
Two-player game of tactical combat. Intermediate complexity.

It's April 17, 2153. The outnumbered miners of the asteroid belt are losing the revolt against Mother Earth. In desperation, they create Star Fist, a mobile asteroid-fortress, and launch it at the Terran Spaceyards in Earth/Moon orbit in a bold punch that the belters hope will cripple Earth's industrial supremacy and give them a last chance to win the war. Protected by ionic shields and drone defense globes, bristling with particle beam turrets and missiles, and boasting two secret weapons, the Star Fist is hoped to be unstoppable. It's up to the battleships, cruisers, destroyers and fighters of the Terran Space Force to prove them wrong.

Star Fist comes with two scenarios, centering on separate attacks by the space forces as they attempt to cripple the Star Fist. It takes about three hours to play a single scenario. Each turn represents an hour. The hex scale is unfortunately unspecified, while every counter represents a single spacecraft or missile. The map is laminated so ship and missile vector arrows can be drawn on it using the crayon provided.

MOVEMENT SYSTEM

The highlight of the game is its movement system. This is a two-dimensional vector system, realistically simulating Newtonian laws of motion. The vector movement system forces both players to think about their attacks three or four turns in advance, since once a ship has accelerated up to speed and is moving in a given direction, it takes just as long to reverse course as it did to speed up. As a result, you feel that you are commanding spacecraft, not airplanes or battleships.

The Star Fist itself doesn't move—it's an immobile point around which the Terran squadron and the fist's own missiles and interceptors maneuver. This gives the game a very different feel from Steve Jackson's earlier "unbeatable machine" game, *Ogre*, as well as adding some "terrain" to a space map.

As the rules book acknowledges, the system is based on GDW's classic **Triplanetary** (a version of which was also used in the original **Traveller** game). But *Star Fist* adds a few extra wrinkles to this hallowed system, especially some very cunning game mechanics to keep ships from drifting off the map or to return them back into play if that does happen, plus a clever rationale to discourage excessive speed.

COMBAT

While maneuvering around the map is fun, the Terran player's real goal is to destroy the Star Fist's weapon system, with victory based on how many systems are destroyed relative to the casualties suffered. The fist's many weapons, sensors, missile bays and shield generators are displayed on a six-by-six grid of installations. When the Terran player inflicts damage, he rolls 2D6 to determine which grid square was hit. A nice touch is that the grid is on a laminated card—when an installation is hit and destroyed, the Star Fist player simply crosses it out with the crayon provided.

Actually getting a hit is tricky. Terran ships have one or two light or heavy particle beams. The closer the range, the higher the hit chance and the better the chance of scoring a "close" or "precise" hit, which gives the Terran player a choice of which installation to damage.

But Star Fist is not an easy target. Before the fist can be hit, its outer force screens must be battered down, and these screens can regenerate every turn! The Terrans will want to try for a "precise" hit by firing from point-blank range, but this requires penetrating a three-tiered globe of missile satellites. And the closer the Terran ships come to the fist, the easier it is for the fist's missiles and particle beam turrets to hit them.

Toward the middle of the game, with the Terran fleet closing for the kill, Star Fist's weapons are blasting Terran ships out of space every turn. While the Terran player is limited to particle beams (and in some scenarios, missiles) the rebel player gets beams, missiles and two special weapons—the warper and the nova gun.

The nova gun is especially deadly, firing balls of plasma that move across the map each turn, annihilating any ship in their path and damaging anything that comes too close. The nova balls don't maneuver, but they are excellent weapons for breaking up Terran formations and disrupting the best-laid attack plans, as I learned at my cost in my first game.

The warper is a tractor-beam that can pull one ship or stack of ships in any direction, altering its vector. This is nastier than it sounds, since a skillful rebel player can use the warper to pull a ship into the Star Fist defense globe or a nova, or worse, can alter the course of a nova bolt to plow through several Terran vessels at once!

While these special weapons are fearsome, the rebel player can't use everything at once. Each turn, Star Fist must carefully allocate energy between six different shields, the warper

and nova gun. The rebel player seems to have plenty of energy at the start of the game, but soon has to make nail-biting compromises, especially if the Terran player attacks simultaneously from several directions.

In addition to attacking Star Fist itself, ship-to-ship combat can take place between the rebel interceptors and missiles and the Terran vessels. With as many as 30 spacecraft on the map at any one time, don't look for the detail of *Renegade Legion* or *Car Wars*. Nevertheless, combat is surprisingly tactical in flavor, far more so than the original **Triplanetary** or than *Ogre*. For instance, Terran ships aren't (usually) destroyed by a single hit—a hit can do temporary or permanent damage to either drive or one of the ship's weapons, with damage tracked on laminated erasable record sheets. There is quite a lot of chrome—rules for ramming (both other ships and the Star Fist, and a crippled ship can still inflict damage!), the Star Fist's requirement to drop a single shield before launching fighters and missiles, Terran in-flight repairs, and last-chance point-defense against missiles. Every Terran ship is named, so you know that you are sending the cruiser *Asmodeus* to its death, or that the battleship *Canopus* just rammed the main shield generator complex. Fun!

FLAWS

In the first few turns, the need to draw vector lines for as many as 30 units is *very awkward* and slows the game to a crawl for the Terran player. Perhaps fewer (more powerful) Terran ships would have been a better choice. The rules suggest using stacking to ease congestion, but even in the first two turns this is virtual suicide in the face of a nova gun or missile attack. Fortunately, the game is bloody enough that after five or six turns the number of units become manageable!

There are also a few minor rules ambiguities. The rules for rebel victory points have the rebel gaining points for each of Star Fist's

installations that survive—so far so good, but the paragraph of the Rebel Victory Points section has *damage* to Star Fist's hardened installations being added to rebel victory points! This appears to be a typo—damage should be *subtracted* from the rebel victory points!

Another minor problem is that the rules for *Star Fist's* interceptors refer the reader to the Terran movement rules, but these contain special cases for ship movement on the first and second turn of the game, enabling them to start with higher-than-normal vectors. It is unclear whether or not these apply to rebel interceptors later launched from Star Fist (as opposed to those starting the map). The way we played it, these special cases did not apply, so interceptors launched from the fist began with a vector of 0 and could maneuver immediately. (Before writing this review, I contacted Steve Jackson Games, who confirmed that this was the correct interpretation.)

Last, while it's nice that a marker was included to draw vector lines, the pale yellow crayon provided is hard to see in poor light even on the black map sheet and is almost impossible to read when used to mark damage on the record sheets. And mine broke in half midway through our first game. I recommend using a black or red grease pencil instead.

EVALUATION

None of these problems seriously hurt the game. *Star Fist* is enjoyable and offers a feast of tactical options, giving it considerable replay value. The nature of the movement system rewards advance planning and gives a real feel for space combat fleet tactics, and I found myself wanting to play it several times to try out very different strategies.

With its atmospheric detail, tactical feel, quality game components and wealth of exciting "chrome," I recommend *Star Fist* to anyone who enjoys science-fiction wargames. It's one of the best tactical space combat games I've seen—and certainly the most realistic. Ω

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I AM STARTING a Talislanta PBM. If you are interested in a unique fantasy PBM set after a cataclysmic war of magic, contact Matt Johnson, 625 W. Malvern, Fullerton, CA 92632. (59)

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STATE COORDINATORS and local representatives wanted for the Committee for the Advancement of Role-Playing Games. Send a SASE to CAR-PGa International HQ, Attn: W. A. Flatt, Chair, 8032 Locust Ave., Miller, IN 46403. (56)

HISTORY OF THE IMPERIUM WORKING GROUP (HIWG) is a Traveller club spanning from Australia to Finland, active in Traveller development. Members receive the bimonthly Tiffany Star newsletter. Write to Ed Edwards, 1410 E. Boyd, Norman, OK 73071. (54)

WRITER would like to contact players and designers for history of the hobby. Older players, second-generation gamers and women are of particular interest. Write to J. Cambias, 18 Georgetown Ct., Durham, NC 27705. (54)

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Please contact Peter Wimmer at 2646 Champlain Ave., Tempe, AZ 85281. (54)

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BATTLETECH 'MechWarrior: Reports of our death have been greatly exaggerated! Samos' Swordsmen, formerly the Federated-Commonwealth 472nd RCT, is seeking any new sibko which is ready for a Trial of Position. Those who survive the training course will be invited to participate in our Cerberus Campaign in the Outworlds Alliance. Are you Star Commander material? Seyla! Anyone interested in a long-running, experienced role-playing campaign should contact Swordsmen Recruiting Command, c/o Khan Gunther Bellows, Route 2, Box 157, Micanopy, FL 32667. (54)

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GDW'S Rebellion Sourcebook (MegaTraveller) or ICE's Spacemaster modules or sourcebooks. I will trade for Twilight: 2000 material (first and second editions) or TSR's Top Secret game material. Contact Kurt Searfoss, 708c NE Ball Drive, Lees Summit, MO 64063. (57)

KALISZ TOWN-GUIDE with map (original in Polish). I will trade for a fair copy of Black Madonna. Arne Rassek, Berliner Str. 23, 3005 Hemmingen 1, Germany. (56)

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Patrick Morgan, 3905 Northern Lights Drive, Pocatello, ID 83201-5934. (61)

ANY PROFESSIONAL or personal work, article, background, etc. dealing with *Star Trek*'s Vulcans or any similar pacifist/logical/scientifically advanced race in any science-fiction RPG (Transhumans, etc.) Please write to Jean-Francois Virey, 17 rue St. Andre, 59800 Lille, France. (61)

ANY AND ALL *FGU Space Opera* supplements/modules, including the following star sector atlas/sourcebooks: *The Galactic Peoples Republic, The Hiss, The Sikozant Belt*. I will buy or pay for photocopies. Contact M. Yount, PO Box 1744, Corbin, KY 40701. (61)

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ISSUES 1 AND 4 of the **Journal of the Travellers Aid Society**, and issue 1 of **High Passage**, either originals or photocopies. Send details to Mark Clark, 598 Thompson Station Road, Newark, DE 19711-7520. (56/53)

COPY OF THE *Near Star List* (all pages) from **2300 AD**. Also *Atlas of the Imperium* and *MegaTrav-*

eller Journal 1. Will pay reasonable price or trade *MTJ 2, MT World Builders' Handbook* or copies of articles from **JTAS** (5-24) or **Challenge** (25+). David Johnson, 11150 Beamer Road #291, Houston, TX 77089. (56)

CYBERPUNK, BattleTech or *Shadowrun* sets for individuals who are incarcerated. Funds are extremely low, so payment may not be possible. If you are willing to *donate* any of the above starting sets, please send them to Benjamin Donovan, #882123, Indiana State Farm, 1500 West US 40, Greencastle, IN 46135-9275. (56)

PARTICIPANTS for a *Shadowrun, Cyberpunk*, etc. APAzine. Please write for information to Niko Wieleba, PO Box 10097, Glendale, CA 91209-0097. (56/51)

LOOKING FOR THE GAME (or supplement) which features Larry Niven's *Ringworld*. I can remember seeing the cover in 1985. If you know where I can find it—or, better yet, have a copy—please contact me. Benjamin J. Rogers, 902 Fulton Ave., Hannibal, MO 63401. (54)

FANZINES

MOTIVE, an Amateur Press Alliance (APA) which covers all aspects of the RPG hobby, is looking for new members. Members contribute to and receive a (+/–) 200-page, bimonthly APA. RPGs most often covered are *MERP, HERO* System, **Twilight: 2000**, *CoC, Shadowrun* and *BattleTech*. Please write to Wayne Peacock, 190 Reed St., Athens, GA 30605. (60)

THE SWORD & BLASTER, a new publication detailing games and groups in the Atlanta, GA, area, is now available. Covers all aspects of roleplaying and boardgames, including reviews, poetry, game schedules, group contacts and more. For information, please contact Jeff Leggett, 2102-B Wexford Dr., Norcross, GA 30071. (60)

ETHER ILLUSTRATED NEWS, a **Space: 1889** newsletter. For additional information, please contact Tom Gray, 101 Hackberry, Apt. 1503, Clute, TX 77531. (59)

INQUISITOR—Warhammer 40K newsletter/forum for experienced players. Eq./vehicle design, open forum, scenarios,

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TRANSACTIONS of the Royal Martian Geographical Society is a quarterly publication devoted to roleplaying in the Victorian age, with a primary emphasis on the game **Space: 1889**. Each 20-page issue features several adventures, detailed descriptions of NPCs and equipment, and background articles on late-19th-century history and culture. Please send an SASE to *TRMGS*, c/o Mark Clark, 598 Thompson Station Road, Newark, DE 19711-7520. (56/53)

MELBOURNE TIMES: Newsletter providing background material for the *Earth Colonies* campaign. Features include news service, world briefs, character sketches, corporate portfolios, political analysis, cultural events and more. Subscribers and contributors send SASE to *Melbourne Times*, c/o David Johnson, 11150 Beamer Road #291, Houston, TX 77089. Overseas include three IRCs. (56)

SS&V (Starships, Starports & Vehicles) is a fanzine that covers the areas listed for **MegaTraveller**. It includes one article, with the rest devoted to designs. *AR (Alien Realms)* is a quarterly fanzine covering aliens in **MegaTraveller**. Currently, two issues are available. Write to Bryan Borich, 3890 50th St., San Diego, CA 92105-3005. (53)

I WISH TO ESTABLISH a fanzine dedicated to *Warhammer* fantasy roleplaying enthusiasts. Interested parties should reply to Rick Taylor, c/o *Der Chroniken Kaiserlich*, 916 S. Booker, Little Rock, AR 72204. (53)

ABA PROCEEDINGS. Exclusively **MegaTraveller** fanzine covering Vland Domain and all areas coreward and spinward. Each issue includes 1+ starship of TL14— (no TL15). Issues 12 and 13 were 10 and 12 pages. For more information, contact Clayton R. Bush, PO Box 119, Limon, CO 80828. Send letter-sized SASE for list of available HIWG documents. Star-

ship spreadsheets available in WK1 (IBM) format on 5.25"disks. (52)

SPINWARD TIMES—a new fanzine dealing with the merchant and economics in **MegaTraveller**. Also included are adventures, medical data, news and equipment. Write to *Spinward Times*, c/o AG Games, 823 Ponsard St., Brossard, Quebec, CANADA J4W 1W1. (51)

SIGNAL-GK—New, exclusive **MegaTraveller** fanzine. Adventure in Dagudasuaag Sector! Each issue will detail a subsector, a particular race and planets. At least two adventures in each issue. *Signal-GK*—A call for help; a call to adventure. Recognized by HIWG. Write to Jay Campbell, The Sanctuary, 45 Fairfield, Hebden Bridge, West Yorks, UK 4X7 6JD. (51)

JUMPSPACE—A new fanzine exclusively for **MegaTraveller**. Includes adventures, equipment, news, players' tips, fiction, and much more. For additional details, write to *Jumpspace*, c/o AG Games, 823 Ponsard St., Brossard, Quebec, CANADA J4W 1W1. (51)

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☐☐☐☐☐☐ **16.** Reviews
☐☐☐☐☐☐ **17.** Classifieds
☐☐☐☐☐☐ **18.** This issue's cover art
☐☐☐☐☐☐ **19.** This issue's interior art
☐☐☐☐☐☐ **20.** This issue as a whole

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Congratulations to Heather Rae White of Ft. Campbell, KY, who won a copy of Dark Conspiracy for sending in her feedback on issue 57.

Next Issue

TWILIGHT: 2000
One of the USAF's most deadly units goes into the merc business in "Spectres in the Sky." And don't miss "Things Got Weirder" for **Merc: 2000**.

MEGATRAVELLER
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Feedback Results for Challenge 57

Westward Ho! (Twilight: 2000) 3.8
Murphy's Laws (Twilight: 2000) 4.1
Shellgame (MegaTraveller) 3.9
Jewell Situation (MegaTraveller) 3.8
Patron (Dark Conspiracy) 3.7
SubAfrican! (Space: 1889) 3.5
Cache and Carry (2300 AD) 3.4
Cult of Deception (Call of Cthulhu) 3.3
Live Eye (Cyberpunk 2.0.2.0.) 3.3
An Arm and a Leg (Shadowrun) 3.4
Green Squad 3 (Star Wars) 3.4
Beast Man (High Colonies) 3.0
Come Join the Party 3.6
Opinion 3.0
Conventions 3.1
Traveller News Service 4.2
Briefs 3.4
Reviews 3.8
Classifieds 3.6
This issue's cover art 3.4
This issue's interior art 4.0
This issue as a whole 4.0

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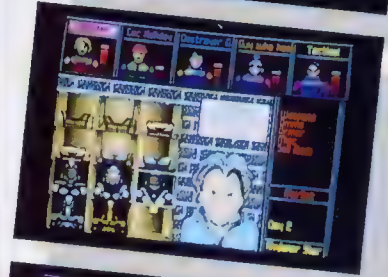
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